

WESTERN INDUSTRY

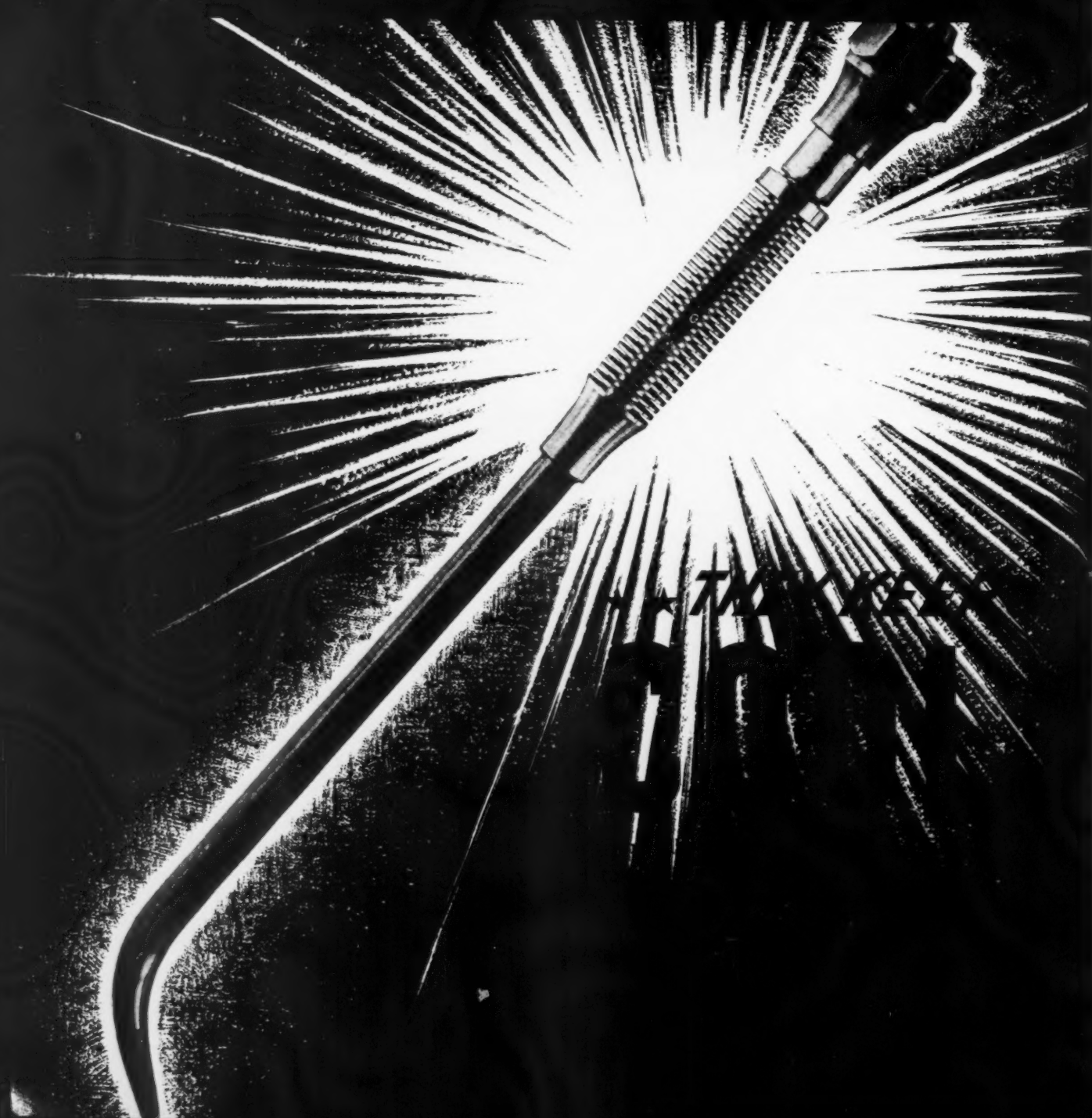
VOLUME VII NO. 8



Steel: Utah Development May Make West Self-Sufficient

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What's New with the Editor

Fact Outspeeds Fancy

INDUSTRIAL history is being made so rapidly in the West these days that flights of fancy have a hard time keeping up with actual facts. Fancy eagerly grasps the suggestion that enormous "flying boats" can cross the "ocean of the air" with men and munitions fast enough and often enough to swamp the armed hosts of brute Nazidom; yes, even to break the menacing grasp of Japanese militarism and shintoism on the islands of the Pacific. ✓ But fact answers fancy immediately: Henry J. Kaiser, of Liberty ship fame, specifically offers to build such air transport and Congress, at this writing, was about to take him up on it. So, our Pacific Coast shipyards that are now breaking records in the building of waterborne vessels may in a few months join our airplane factories in fabricating newer and more startling craft.

Making the West Self-sufficient

To do all this, or even merely keep up our present output of ships, planes, etc., requires steel. And Admiral Vickery, vice-chairman of the U.S. Maritime Commission, says that within a few months he is going to see to it that Western yards build their ships entirely with materials made entirely on this coast, instead of getting their supplies from the other side of the Rockies. ✓ He is in agreement with J. R. Mahony of the University of Utah (see pages 8-10 of this issue) who insists that Utah's new steel industry will make the West entirely independent of eastern and southern mills. Mr. Mahony believes Utah is the only locality in the West suited to be a real steel center—yet in Southern California steps are already being taken to develop iron ore from San Bernardino County.

Rubber and Resiliency

Down, down, like a punctured tire, went our hopes in the first few months following Pearl Harbor, with rubberless automotive transport almost equally as discouraging a prospect as the military and naval situation. But such is the resiliency and mobility of American thinking that we are already on the way to a synthetic rubber output that eventually will answer all needs, perhaps sooner than anyone expects. ✓ The West is by no means out of this picture; in fact, it seems to be very much in it. It is publicly announced that synthetic rubber will be manufactured in Southern California, and reasonably trustworthy grapevine informs us that the various California oil companies have been holding secret meetings to determine their course of action. ✓ Standard of California and Tide-water Associated are reported to be in the group of oil companies favoring the Houdry process which the WPB passed up in favor of the first entry in the race, the process supported by Standard of New Jersey and other oil companies and some tire manufacturers. Dow Chemical Company's place in the picture is so mysterious that its officials out here won't even discuss the matter with reporters. They say they all had to sign a government pledge not to talk about it with anyone.

Proverbs Never Perish

Our own war program and lend-lease, not to mention the earlier New Deal spending era, knocked the national debt limit so far over the right field fence that no one could ever hope to find it again. But tortoises still exist in the same world that invents 400-miles-an-hour planes, and out of the scrap piles of rubber and metal is slowly being unearthed the ancient maxim to "look after the pennies and the dollars will take care of themselves."

WESTERN INDUSTRY

The Journal of Western Development

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COVER PICTURE

• Utah's new steel industry is one of the most important developments that ever has taken place in western industrial history. On the front cover is shown an open hearth steel furnace in the Columbia Steel Company plant at Pittsburg, similar to installations that will be made at Provo, Utah.

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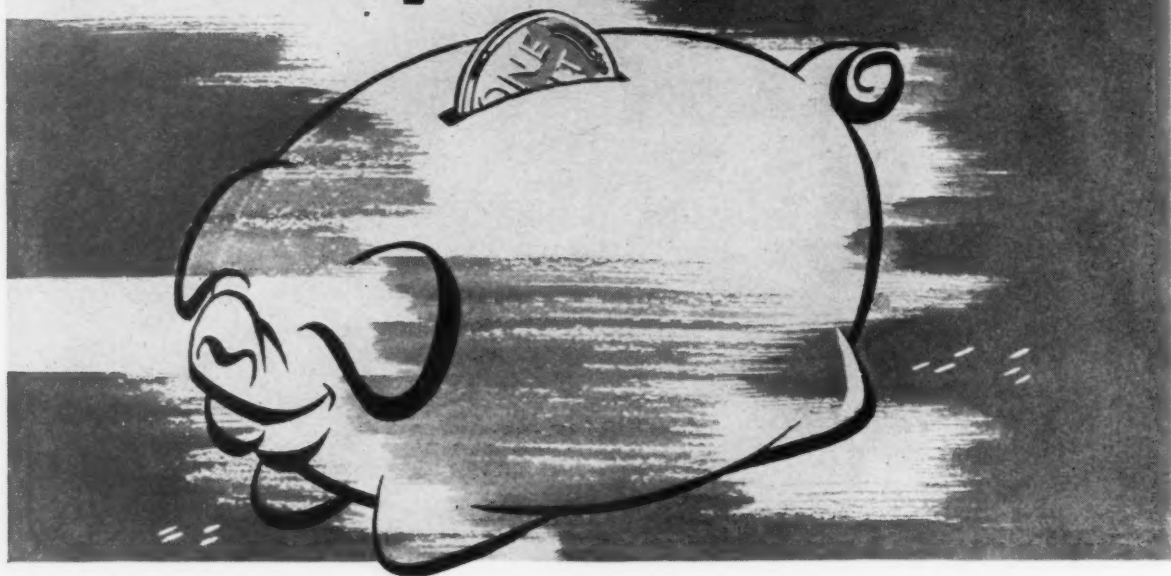
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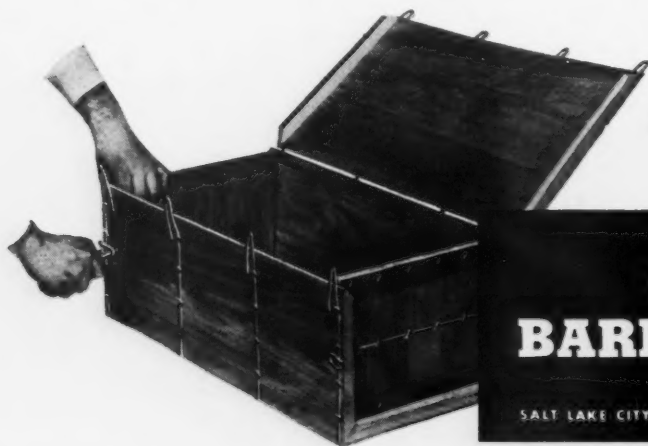
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Spotlight on the News

Western Industry
FOR AUGUST, 1942

Vol. VII

No. 8

Synthetic Rubber Factories For West

TWO synthetic rubber plants will be in operation in Southern California early in 1943. These are a \$40,000,000 project by Goodyear Tire and Rubber Company and one costing \$30,000,000 by Firestone Rubber Company. Both will utilize the butadiene process. Firestone has taken options on 280 acres of land, and Dow Chemical Co. will produce styrene and Shell Oil Co. and Southern California Gas Co. butadiene for Firestone's use.

These industries will continue after the war, according to W. S. Harman, project engineer for Firestone, who said that by locating them in Southern California, tank car shipments can be eliminated and raw materials piped to the plants. All products of these rubber plants during the war will be furnished to the government's rubber reserve pool.

Imperial Valley farmers and business men have set up a committee to apply for priorities to construct a 10,000-gallon distilling plant to make industrial alcohol for synthetic rubber.

☆ ☆ ☆

Steel Mill For Southern California

A new iron and steel plant producing 75 tons of high grade iron or steel daily as initial output, with ultimate capacity of 750 tons, will be built at Azusa, California, by the Pacific Coast Iron Corporation. Ore from Riverside and the San Bernardino Mountains, about 50 miles away, will be used. Capital investment is given as \$250,000.

The Cladon-Hicks process will be used, employing three-phase electric furnaces designed under the direction of President

Donald MacDonald. Publicity releases state that the furnaces will reduce metal from ore in about half the ordinary time and using approximately one-third of the electric current consumed by other standard furnaces. High temperatures are attained by means of a new kind of transformer winding.

Petroleum coke will be used exclusively, eliminating the need of importing eastern coke.

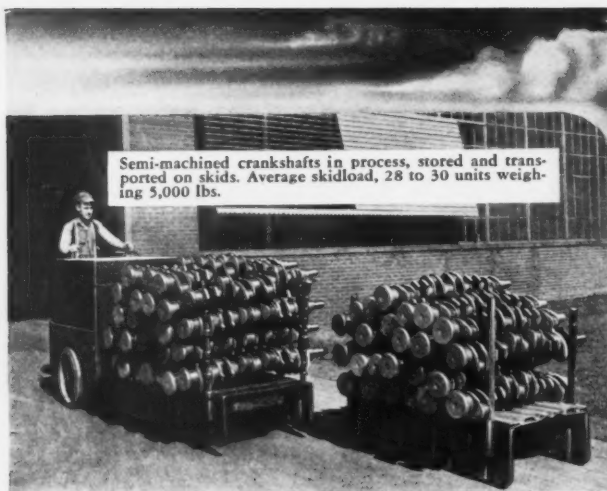
This is Southern California's second steel project, as the Henry Kaiser interests already have under construction a \$48,700,000 plant at Fontana, about 30 miles east.

Wood Products Lab For Weyerhaeuser

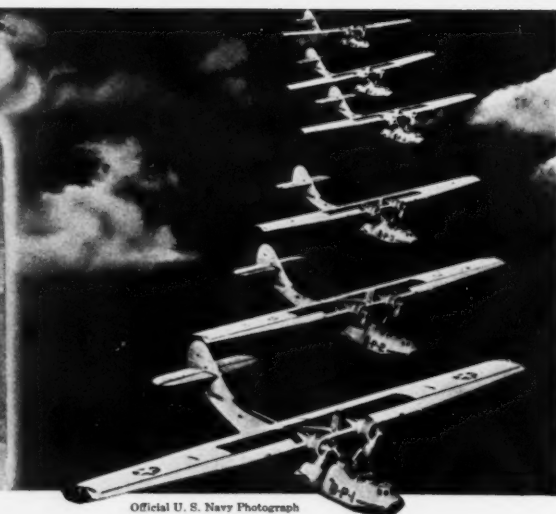
A \$100,000 building to house a wood-products laboratory, a new operation of the Weyerhaeuser Timber Company, is now under construction at Longview, Wash. It is expected to be the largest privately-owned plant of its kind in the country. Clark Heritage of Cloquet, Minn., technical director of Weyerhaeuser's Wood Conversion Company of Cloquet, is directing construction. It will contain seven laboratory departments on its second floor with its first floor devoted to pilot plant operations and heavy machine work.



• *Down the ways slides the transport U.S.S. Doyen at the Long Beach yards of the Consolidated Steel Corporation, named after Brig. Gen. Charles A. Doyen, who commanded the 4th Marine Brigade in France in the World War. Official U. S. Navy photo.*



Semi-machined crankshafts in process, stored and transported on skids. Average skidload, 28 to 30 units weighing 5,000 lbs.

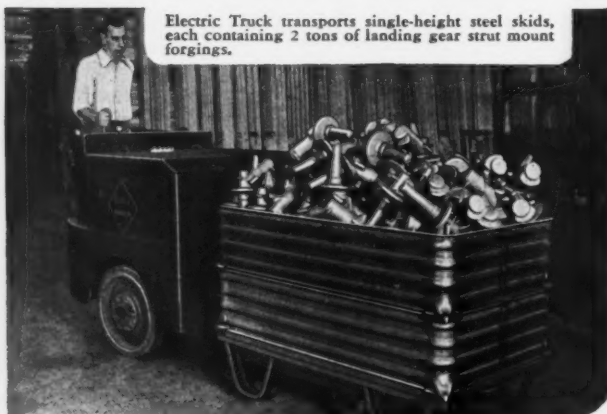


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MULTIPLIED MANPOWER GETS MORE PLANES UP FASTER!



Double-deck platform skid delivering miscellaneous supplies in an aircraft plant. This is part of a "pick-up-deliver" system using Elwell-Parker Trucks.



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18,000 Women In Aircraft Plants

Approximately 18,000 women were employed in California aircraft plants as factory wage earners in June, 1942, compared with less than 500 in February, 1941. In addition to those employed as plant workers, more than 8,000 women were working in clerical and technical capacities in June, 1942, making a grand total of over 26,000 women employed in the aircraft industry in California during that month.

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Factory For Cargo Planes At Portland

Some of the cargo planes projected by Henry J. Kaiser may be built at Portland, Oregon, and entirely of wood. Yates Aircraft Company have taken options on manufacturing sites in the vicinity of Portland and are awaiting the return from Ohio of some of their engineers who have been loaned to Waco Aircraft Corporation, who are engineering under government contract an all-wood cargo plane.

Fred H. Kelley, president of the Yates concern, reports that a plant of some 300,000 square feet of floor space is in view, employing 3,500 workers on an assembly line basis.

Another possibility for wooden aircraft is seen in the news in the recent announcement that the Dean Company, Chicago, one of the nation's largest veneer manufacturers, had leased a plant at Gresham, Oregon. The plant consists of a five-acre site and three factory buildings. Extensive alterations and improvements will be undertaken immediately, with actual production scheduled to start in 30 days.

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Westinghouse Thinks In Expansion Terms

What Westinghouse thinks of western possibilities is evidenced in two things, the announcement of an expansion program of several hundred thousand dollars for its plant at Emeryville, California, and the remarks of Vice-President B. W. Clark about aluminum and other metal prospects.

The tremendous electric power output from Bonneville and Grand Coulee Dams is of great importance in the development of aluminum, he said when visiting San Francisco on July 31, and will make Pacific Northwest locations a big manufacturing inducement. Aluminum and lighter metals will replace steel for many uses, in his opinion, and aluminum at new low prices, such as 7c a pound, is likely to make it to a great extent uneconomical to use plastics.

Mr. Clark, who is president of Westinghouse Electric Supply Company in addition to being vice-president in charge of

sales for the parent Westinghouse Corporation, foresees resumption on a tremendous scale of production of consumer goods after the war, along with a public works program to take up any slack in employment. One of the knotty problems, however, is to get the government to allow corporations to set aside money now for research work for the future.

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Electrode Factory

Arc Rod Company, who have plants at Sparrows Point, Maryland, and Cleveland, Ohio, have purchased four and one-half acres of ground at Pittsburg, California, for a \$175,000 factory to make welded electrodes for shielded arc welding. The building will cover 37,000 square feet on the first floor, with a 10,000-foot mezzanine. R. J. Hewett, Arc Rod representative on the Pacific Coast, will be in charge. From 50 to 60 men will work on 24-hour shifts on a six-day basis.

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Alloys For Planes

Washington State College at Pullman has been granted \$10,000 by the Washington State Planning Council to continue research for making magnesium alloy castings. The college is contributing \$31,500 for the project and is seeking \$13,000 from the Reconstruction Finance Corporation. Lighter weight of magnesium alloy would give it preference for airplanes over aluminum if produced commercially.

Another Score For the West

SECOND fronts are no problem to Henry J. Kaiser. When his shipyards on the Pacific Coast couldn't break records fast enough to keep up with submarine sinkings, he announced his plans to utilize the yards for building 5,000 gigantic air transports that will cross the "ocean of the air" fast enough and often enough to win.

It may have sounded like a pipe dream to many people. In fact, plenty of them said so, but he sold one person after another on the idea, and when he reached Donald Nelson, the WPB chief promptly gave him support. Nelson told him if engines and other materials could be built without disrupting the present military aircraft program, which is the No. 1 war essential, he would get the go ahead signal.

Kaiser's program will make the West even more important than ever in the war effort, because the materials will largely be drawn from western sources. Aluminum, steel and wood products will be required. Kaiser already is building a \$48,000,000 steel mill in Southern California. U. S. Steel Corporation has a huge plant under construction at Provo, Utah, and aluminum factories are an important feature of the Pacific Northwest development resulting from the Bonneville and Grand Coulee dam projects.

• Henry J. Kaiser (right) bears Admiral Howard Vickery (left), vice-chairman of the U. S. Maritime Commission, announce that he will see to it that Pacific Coast shipyards are supplied entirely with materials from the West, instead of going East for them.



Western Steel Needs May All Be Supplied From New Utah Furnaces . . .

By J. R. MAHONEY

Director, Bureau of Economic & Business Research, University of Utah

A WESTERN steel industry largely independent of eastern and southern steel mills is part of the industrial pattern developing in the western region of the United States. A more complete development of steel facilities should remove a great handicap to western development and provide for an important increase in population and industry that in turn would increase the needs for more steel and lead to still further development.

The basic soundness of the development in Utah, where approximately 4,000,000 tons of iron ore yearly will be required for the installed capacity of the new blast furnaces at both Ironton and Geneva, hinges on the supply of raw materials, economy in production and size of the market to be served.

Before steel reaches its final stage, ordinarily three or four tons of coal per ton of finished steel are required; this includes about two for the coke used in the blast furnace and about the same amount beyond.

Coal Is the Key

It can readily be seen that the presence of great deposits of coal of proper quality that can be economically mined is a matter of great significance for the location of an iron and steel industry. This is Utah's chief claim to a prominent part in western steel development. The scarcity of such deposits makes any location west of Utah of doubtful economic importance.

Not only does Utah have ample tonnage of coal, but the physical features governing its production, such as nearly horizontal position of the beds, thick seams—eight to sixteen feet thick—no necessity of hoisting, favorable roof and floor conditions and other factors making for economical mechanized mining, are present in highly advantageous relationships.

Utah coals are more volatile and will yield less coke per ton than eastern coals—about 53 per cent as compared to 67 to 70 per cent. But the volatiles constitute a credit and the larger per cent in Utah coals will furnish more gas, ammonia, tar, oils, etc., per ton of coke produced.

More than 80,000,000 tons of iron ore are known to be available, and it has been the experience of most districts that early estimates are almost universally conservative. In any event the amount of iron ore available for the projected plants in Utah is greatly in excess of the present high

grade iron ore reserves that serve as the foundation of the steel mills in the Chicago, Pittsburgh and Ohio valley areas when compared with the installed capacity in those regions.

Lower assembly and materials costs in Utah than either Gary or Pittsburgh, and closely approaching Birmingham, with cheaper transportation to the Pacific Coast, are indicated in the accompanying tables.

Estimated assembly costs in the production of pig iron have been compiled from various sources after examining all available information. Adjustments have been made for different grades of ore, coke yield of coals and needs of flux. The results given are believed to be an approximation to typical conditions in each district.

In all cases the iron content of the pig iron has been assumed to be 100 per cent iron, which, of course, is not correct, but it affords a fair basis of comparison. In the case of Birmingham it takes more than a ton of coke because of the lower iron content of the ore charged to the furnace. The figure used was 1,900 pounds for both

Gary and Pittsburgh and 1,800 pounds for Utah.

The fact that the Utah furnaces will be among the largest and most modern should cut the coke consumption to somewhere near the 1,700 figure that is currently understood to be the amount required under the Utah situation.

It is a coincidence that the final cost of the materials per ton of pig iron as given is exactly the same for Gary and for Pittsburgh. The higher cost of iron ore at Pittsburgh, because of the added rail rate from Lake Erie to Pittsburgh, is exactly offset by the higher freight cost that Gary has in bringing coal for the coke.

The value of the coke was taken from the *Minerals Yearbook* for Birmingham, Gary and Pittsburgh which would be probably somewhat higher than it would be available to the companies actually in business of producing it themselves.

In the case of Utah, the coal was figured at \$1.50 per ton at the mine with the same cost of assembly, and the figures given for the value of coke were merely

EASTERN AND WESTERN COSTS COMPARED

Cost of Materials Per Ton of Pig Iron

<i>Birmingham</i>	Iron Ore	Flux	Coke	Total
(Value of ore at mine \$1.65 per ton)				
(2.7 tons).....	\$ 4.45	\$.30	\$3.40	
Cost of assembly.....	1.25			
	\$ 5.70			\$ 9.40
<i>Gary</i>				
(Value at mine \$2.59 per ton).....	\$ 4.80	\$.45	\$5.74	
Cost of assembly (1.85 tons).....	3.52			
	\$ 8.32			\$14.51
<i>Pittsburgh</i>				
(Value at mine \$2.50 per ton).....	\$ 4.80	\$.45	\$3.38	
Cost of assembly (1.85 tons).....	5.88			
	\$10.68			\$14.51
<i>Utah</i>				
(Value of ore at mine \$1.00 per ton).....	\$ 1.85	\$.45	\$4.60	
Cost of assembly (1.85 tons).....	2.87			
	\$ 4.72			\$ 9.77

Estimated Assembly Costs in the Production of Pig Iron

	Iron Ore	Coal	Flux	Total
<i>Birmingham</i>	\$1.25	\$1.64	\$.09	\$2.98
<i>Chicago</i>	3.52	3.99	.26	7.77
<i>Pittsburgh</i>	5.88	.31	.37	6.56
<i>Utah</i>	2.87	2.30	.14	5.31

an addition of these two figures. But this would be modified by the cost of coking the coal and allowance for important by-products which should be credited against these figures.

Since the amount of these by-products is substantially higher for Utah, where 47 per cent loss is figured for coal in the coking process against only 30 per cent for the other regions, the credits should be important, but for conservative figuring no credit was added.

When these factors are all taken together, it can be seen that the cost of the materials together with their cost of assembly for Utah and Birmingham are very close together, and there are enough elements in the situation to indicate the probability that Utah may be the place in the United States where pig iron can be produced most economically.

It is evident that we do not start out with a handicap in this regard, but have a rather distinct advantage over both Gary

and Pittsburgh. In fact, the advantage is almost equal to the cost of transporting the pig iron and the steel products from Utah to the Pacific Coast, so that this western industry based on Utah has a solid economic foundation for being essentially independent of eastern iron and steel production.

As far as raw materials are concerned, Utah has a favorable situation in the high quality of the cheaply mined iron ore, low taxes on the iron ore property and reasonable freight rates from the iron ore mines to the blast furnaces. Added to this will be the cheap cost of mining the coal. The flux is also cheap to mine and the assembly cost is very low.

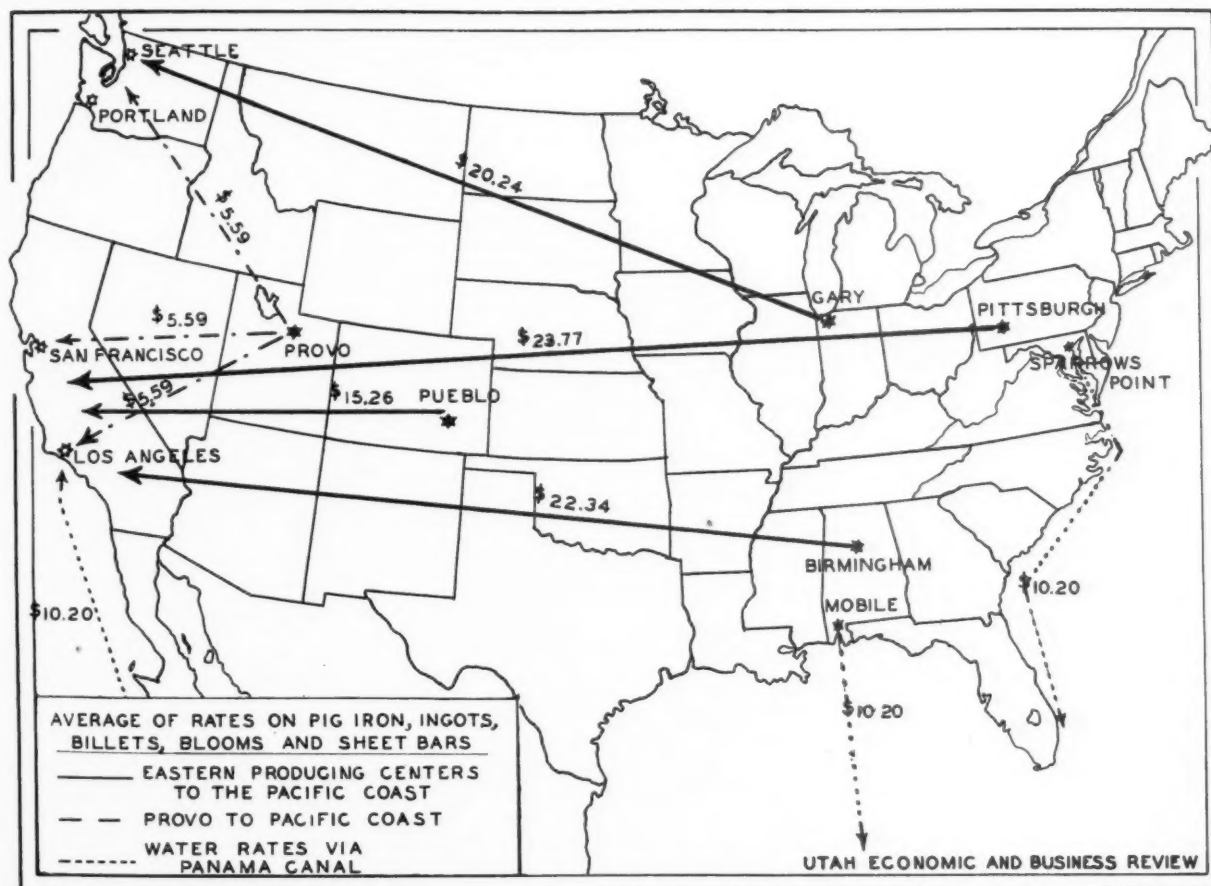
Offsetting Birmingham's low cost of assembly must be placed several factors of significance. In the first place, the more expensive underground mining of the iron ore is a matter of considerable importance. The same thing may be said of the mining of the coal, where the existence of thin seams coupled with the necessity of washing the coal and the pumping of large volumes of water, partly offset the cheap cost of assembly.

There must also be added other disadvantages arising from the lower quality of iron ore. This requires handling greater tonnages for a given production of pig

Comparative Freight Rates on Selected Iron and Steel Commodities to the Pacific Coast*

	PIG IRON \$ Gross Ton	INGOTS, BILLETS, BLOCKS \$ Gross Ton	SHEET BARS \$ Gross Ton
All-Rail Rates:			
Ironton, Utah	\$ 4.95	\$ 5.78	\$ 6.05
Pueblo, Colorado	7.70	19.04	19.04
Gary	11.44	24.64	24.64
Birmingham, Alabama	13.70	26.66	26.66
Pittsburgh, Pennsylvania	15.41	28.45	28.45
Water Rates:			
Sparrows Point, Maryland	10.20	10.20	10.20
Mobile, Alabama	10.20	10.20	10.20

*Compiled from special reports from freight agents in eastern and southern steel regions and compared with a report prepared by H. W. Prickett, Traffic Counsel of the Department of Publicity and Industrial Development, State of Utah.



iron, necessitating more coke for smelting and a reduction in the capacity of the blast furnace, thereby adding to the capital, fuel and labor costs.

For the Pittsburgh region the advantage in cheap cost of assembling the coal is offset, in comparison with Utah, by the higher cost of the iron ore, made up mainly of higher freight rates and higher taxes on the mining property from which the ore is taken. The quality of the ore is some little higher for Utah than for Pittsburgh.

Assembly cost for iron ore is less for Chicago than it is for Pittsburgh, but it is still greater than it is for Utah. Chicago also is at a disadvantage in comparison with Utah because of the higher cost of assembling the coal for the coke, but may have some advantage in the market for the by-products of the coking process.

Utah is strategically located from the point of view of distributing iron and steel products to any part of the Pacific Coast. Direct rail lines radiate in a fan-like manner from Utah points to each of the three population and industrial centers on the Pacific Coast—the Los Angeles area, the San Francisco region and the Pacific Northwest.

Steel making capacity beyond local needs at any one of these three points would require a shipment to the others that would be a large part of or in excess of the cost from Utah to either one of the other two points.

The fact that it requires four to six tons of raw materials for one ton of finished product and the plentiful supplies of these in close proximity to each other in Utah are very compelling reasons for the location of pig iron and basic steel production in Utah to supply the Pacific Coast region.

Under present conditions the bulk of steel consumption in the West is located along the Pacific Coast, and so, from the immediate point of view, the problem involved is that of the transportation from other steel producing centers to the Pacific Coast as compared with the Utah location. The principal points from which comparison should be made are; Pueblo, Birmingham, Sparrows Point, Pittsburgh, and Chicago.

The accompanying table gives the comparative carload freight rates to the Pacific Coast ports. These are all-rail freight rates and for comparative purposes the water rates from Atlantic Coast ports are included. These water rates, however, are not significant now and have not been for several months, since traffic of this type has ceased because of the necessity of using ships for other needed war purposes. This condition will continue until the emergency is over, but even these all-water rates from plants located on the eastern coast are still considerably higher than the all-rail rate from Utah to the same coast points.

On the basis of the steel to be used in

Blast Furnace and Steel Capacity Net Tons*—As of April, 1942

Distribution by Districts:	Annual Blast Capacity	Annual Steel Capacity
Eastern	11,781,750	18,105,250
Pittsburgh-Youngstown	24,321,820	37,447,200
Cleveland-Detroit	6,008,930	7,825,840
Chicago	12,916,450	18,953,210
Southern	4,258,830	3,598,000
Western	971,800	2,341,130
	60,259,580	88,270,630

*Source: American Iron and Steel Institute.

Western Steel Capacity (Gross Tons)

Pueblo	Present	Additions	Total
Blast Furnaces	564,000	84,000	648,000
Open Hearth	1,131,210	.....	1,131,210
Electric	.....	.....	.....
Provo			
Blast Furnaces	193,000	1,835,000	2,028,000
Open Hearth	.....	1,098,000	1,098,000
Electric	.....	.....	.....
San Francisco			
Blast Furnaces	.....	.....	.....
Open Hearth	554,970	120,000	674,970
Electric	22,000	84,000	106,000
Los Angeles			
Blast Furnaces	.....	607,000	607,000
Open Hearth	328,100	652,000	980,100
Electric	45,100	.....	45,100
Seattle			
Blast Furnaces	.....	.....	.....
Open Hearth	165,000	60,000	225,000
Electric	8,000	7,000	15,000

shipbuilding alone in 1942, which is close to 2,000,000 tons for the Pacific Coast shipyards, the differential of \$9 to \$15 a ton will amount to \$18,000,000 to \$30,000,000 of excess freight that must be paid above what would be necessary if facilities were available in Utah to meet these needs. This would mean a very substantial installment on the cost of the steel plant in the course of construction at Geneva.

With the restoration of peace and the return to the coastwise trade of sufficient vessels to take steel again to the Pacific Coast from the Atlantic and Gulf coasts this freight differential in favor of Utah would be reduced, but nowhere near eliminated. For those plants located inland that must add to the water rate, a rail rate to the coast, the situation would be changed very little.

The new iron and steel plant at Geneva will be of strictly modern design which will make it the most up-to-date plant in the country, and this will be of considerable significance in the competitive position of the Utah plant.

For a long time the chief advantage that Gary and the Chicago plants had over Pittsburgh in the cost of making steel was this factor of more modern equipment, since the assembly costs of the raw materials are greater for Gary and Chicago than

for Pittsburgh. But progressively their advantage has disappeared as the Pittsburgh plants have been modernized, and when the two are in the same technological condition, Pittsburgh will probably have a slight advantage in the cost of producing pig iron and steel. The advantage Gary and Chicago have in cost of transportation on iron ore is more than offset by the greater cost in bringing the coal to the coking plants. The new Geneva plant will give Utah an initial advantage that will be retained as long as the installations are superior in efficiency to the older plants in other sections.

Potential markets for western steel mills include between 500,000 and 1,000,000 tons of tin plate for the canning industries, of which only about 35,000 tons are produced in the West at the present time, plates and shapes for West Coast shipyards and steel for the railroads.

Our shipyards on the West Coast will require from 1,560,000 to 1,680,000 tons of plates and 300,000 to 360,000 tons of shapes in 1942, very little of this now comes from western processing plants. These yards account for 35 per cent of the ships being built or under contract in the United States, and if it is assumed that this percentage of the national shipbuilding output continues after the war, which is entirely reasonable, there will be a continuing demand from this source.

Yearly average steel consumption for the last four years for railroads has been 3,458,700 tons, and the western states have 17 per cent of the mileage of the Class I lines. A significant proportion of the western needs is now being supplied by the steel plant at Pueblo, Colorado.

New Trona Deposit

Discovery of a large Wyoming deposit of non-metallic mineral trona, used in manufacture of munitions, aluminum and other critical materials, as well as glass, soap and sugar, is reported by the U. S. Bureau of Mines. The deposit, near Green River, includes one bed 15 to 20 feet thick at a depth of 1500 to 1600 feet, and apparently has reserves of hundreds of millions of tons which probably could be mined cheaply by the room and pillar system. California has the only other natural soda deposit being worked.

Idaho Production Pools

Two war production pools in Boise, Idaho, have been approved by the WPB. They are the Southern Idaho Metal Working Group with Morrison-Knudsen Company acting as prime contractor and manager for 13 sub-contractors, and J. O. Jordan & Son working in cooperation with E. W. Little Co. and the Boise Sash and Door Company. The Idaho Manufacturing Company of Twin Falls is another group seeking approval.

BRINGING VICTORY NEARER

Combing the West for Steel In Scrap Salvage Campaign

By A. H. RICHARDS

Regional Chief, Industrial Salvage Section,
War Production Board

EVERY citizen of the United States is vitally interested in winning the war which has been thrust upon us. But many citizens, including industrial leaders, do not yet realize that the war will be lost unless an all-out effort is made.

Ships and more ships must be built to carry guns and munitions of all kinds to the fighting fronts. Raw materials are not being produced in sufficient quantities to carry on this huge construction program.

Huge tonnages of scrap must be collected and sent through regular channels to mills, foundries, refineries, and smelters, to keep shipbuilding, airplane, tractor and munitions plants operating at their present capacity.

Considering the nation-wide picture, the records disclose that in January of this year, 40 open-hearth furnaces were shut down because of lack of iron and steel scrap. Two months later, this number had been reduced to 20, and in the middle of the year, all furnaces were operating, except during times that they were down for repairs.

The war production's salvage program was largely responsible for bringing in the additional scrap iron and steel necessary to keep these furnaces operating. This program is divided into four sections, viz:

1. The General Salvage Section, which has for its objective the bringing out of salvageable materials from the homes, farms, and municipalities.
2. The Industrial Salvage Section, charged with the responsibility of acquainting industry with the urgent need of scrap, setting up area committees of industrial executives, and stimulating the efforts of these committees, so as to bring into the defense bloodstream all normally produced and dormant scrap, as well as obsolete stocks, machinery, and equipment.
3. The Automobile Graveyards Section, which, as its name indicates, is concerned with seeing that a steady stream of scrap comes from these automobile graveyards and that only normal working stocks are maintained in the yards.
4. The Special Projects Section, which brings into the defense program large accumulations of secondary and waste materials that are tied up, due to financial, legal, political, or other reasons, and which cannot or are not being handled by other salvage sections in their normal course of operation.

While at the present time no open-hearth furnaces are down due to lack of steel and iron scrap, the national steel and iron scrap inventories are dangerously low, there being only a little more than one month's supply.

In some parts of the United States, steel mills are operating on a two-week inventory. This inventory must be materially increased before winter, to insure steel mills and furnaces operating continuously during the winter months, during which time the flow of scrap materially decreases.

Figures compiled by the United States Bureau of Mines indicate that during the first six months of 1942, approximately 13,700,000 net tons of iron and steel scrap were shipped from all collected sources. To insure continuous operations this winter, 17,000,000 net tons of iron and steel

scrap must be collected and sent to the steel mills between July 1 and December 31.

Pacific Coast shipbuilding, airplane, and munitions factories have been enlarged and have been called upon to furnish a sizable percentage of the total war needs.

Additional facilities for converting iron ore into pig iron and new rolling mill capacity are under construction in Utah. One open-hearth furnace has been put into operation in California and others are being built and will be put in operation by the end of the year.

California and the other Pacific Slope states must contribute tonnages of iron and steel scrap to keep furnaces, rolling mills and foundries operating at capacity. At the present time it is estimated that California, Washington, Oregon, Nevada, Idaho, and Arizona must collect at least 130,000 tons of iron and steel scrap per month during the last six months of 1942. California

• *When this obsolete Colorado Fuel & Iron Co. blast furnace at Pueblo cracked up under a charge of dynamite, it made life just that much safer for Americans and their allies under arms.*



alone must collect 100,000 tons per month, and industry in California must contribute at least half of this amount or 50,000 tons per month.

At the present time, through reports received by secretaries of the Industrial Salvage Committees, who are functioning under the Industrial Salvage Section, Conservation Division, War Production Board, it is indicated that 25,000 tons of iron and steel per month is being collected by industry.

An appeal has been sent to the heads of industries, requesting that they give personal attention to the collection of scrap, the wrecking of obsolete equipment, and making available to the war program all excess obsolete supplies, which are lying dormant in the plants under their jurisdiction. Personal attention by the heads of industries is necessary if this huge task is to be performed.

At a recent railroad salvage clinic, a statement was made by Mr. Jeffers, president of the Union Pacific Railroad Company, to the effect that after circularizing his division heads and asking them to do a real salvage job, considerable additional salvage was turned in. Knowing the nation's urgent need for scrap iron and steel and rails, he decided to augment this circularization by personally visiting every branch of the railroad, with the hopes of stimulating the flow of this material into the war defense program.

The impetus given this salvage program by his personal contact, has already accounted for an additional movement of

75,000 tons of salvage. He assured those attending the clinic that from reports being received, another 25,000 tons would be collected as a result of his giving his specific attention to this job. There are many other instances similar to the one cited above.

Shortly after the industrial heads were called together in Colorado and became acquainted with the urgent need of salvageable materials, the president of a steel company gave his personal attention to the salvage operations in the plants under his jurisdiction. Obsolete iron blast furnaces, which had not been in use for some years, were wrecked.

The top executive of a large shipbuilding, drydock company in California, who was impressed with the urgent need of salvaging materials in the war defense program, took the matter under his personal direction and in a short time, by wrecking certain obsolete equipment, demolishing old cars which had not been used for years, and by inaugurating a real salvage program, collected and disposed of approximately 34,000 tons of scrap.

These are some accomplishments that industries can obtain if an all-out effort is made by the official who is responsible for the operation.

Contemplated construction of many plants being built for constructing ships and other war equipment have been stopped, as there is insufficient plate steel production for plants now in operation.

Present steel mills and rolling mills

must be kept operating at peak capacity, even though it requires the wrecking of idle machinery and equipment which industry believes suitable for use some time in the future. Sufficient iron and steel scrap must be collected to assure the continuous operation of all furnaces during the coming winter.

While iron and steel have been emphasized in this article, the need of other materials vital for the defense program is equally important. Non-ferrous metals, rubber, rags, and burlap are needed in large quantities, and the huge construction program calls for increased tonnages being salvaged by industries, as well as by the public.

Industry's whole-hearted support of the industrial salvage program means an all-out effort, which briefly can be stated as follows:

First, appoint a man to be responsible for the salvage activities in every industrial plant.

Second, personal attention from the executive responsible for the entire organization. Personal inspection and contacts in following up this program is the only method of assuring that a real salvage job is being done.

Third, have a man responsible for salvage report regularly the tonnages collected to the Industrial Area Committees. This report is necessary in order to evaluate the effectiveness of this program.

Furthermore, contact representatives of the Industrial Salvage Section, Conservation Division, of the War Production Board, in your area, if they can be of any help to you in the segregation and disposal of salvageable materials.

• To speed production Southern California aircraft plants are freely exchanging ideas and information. Here is the Aircraft War Production Council's advisory committee on production: Kneeling, left to right—Jack Pierson, Douglas; John Demarce, Consolidated; H. Virgil Guadette, Lockheed; H. Bowling, Consolidated; E. Malloy, Ryan; C. Sharpe, Vultee; J. J. Fluck, North American; C. C. Hilliard, Douglas. Standing—R. A. Lawson, Vultee; Harris MacIntosh, Vega; George Pruden, Vega; R. R. Nolan, Northrop; Paul Buckner, Northrop; L. H. Provost, Douglas; T. O. Heydenfeldt, North American; G. E. Barton, Ryan; J. E. Young, Douglas.



Credit for Scrapping

Manufacturers may obtain income tax credit for scrapping of equipment, *Western Industry* is advised by Richard Nickell, Acting Collector of Internal Revenue at San Francisco.

Quoting a decision in the Avon Mills case (7 B.T.A. 143), where one of the issues was whether or not petitioners were entitled to loss on account of certain machinery discarded and scrapped, the opinion in the decision held in part as follows:

"Various losses were claimed on account of machinery and equipment discarded and scrapped, though at the hearing evidence was introduced only as to certain items purchased in 1911 at a cost of \$62,500 and discarded in August, 1919, when a scrap value of \$2,129.77 was realized. The difference between cost and realized scrap value, less sustained depreciation, which should be computed at 5 per cent prior to April 1, 1917, and at 10 per cent thereafter, is an allowable deduction from gross income for the fiscal year ended March 31, 1920, and should accordingly be allowed."

The Internal Revenue Code Regulation 103 provides in part as follows: "When, through some change in business conditions, the usefulness in the business of some or all of the capital assets is suddenly terminated, so that the taxpayer discontinues the business or discards such assets permanently from use in such business, he may claim as a loss for the year in which he takes such action the difference between the basis *** and the salvage value of the property *** requires proof of some unforeseen cause by reason of which the property has been prematurely discarded. *** This exception does not extend to a case where the useful life of property terminates solely as a result of those gradual processes for which depreciation allowances are authorized. It does not apply to inventories or to other than capital assets."

Cooperation Between School and Factory

A series of conferences on cooperation of education and industry, sponsored jointly by the National Education Association and the National Association of Manufacturers, was held in Los Angeles, San Francisco and Seattle in July. Dr. Alonzo F. Myers, chairman of the former association's commission for the Defense of Democracy through Education, was the principal visiting speaker.

NAM has previously undertaken similar conferences in other fields, such as the churches, home and agriculture, and the NEA commission is also expanding its efforts. Dr. Myers said the purpose of the commission was to bring out the necessity of better education in order to preserve democracy, adequate financial support for education, to investigate charges against teachers, schools and teaching methods and to provide defense against unjust attacks.

An estimated shortage of 100,000 teachers has arisen in the United States, he said, due largely to higher wages in other industries.

R. W. Vinnedge of North Bend, Wash.,



•Honors for engine production. C. E. Moore, president, Joshua Hendy Iron Works, with vice-president Felix Kahn, Admiral H. L. Vickery and Carl Flesher, West Coast construction director for the U. S. Maritime Commission, take a look at engine castings.



•Four oldest Hendy employees stand by to raise the burgee. J. M. Brown, Manuel Dutra, James Miglio, William C. Theller.

Maritime "M" Awarded Joshua Hendy Factory

Joshua Hendy Iron Works received the coveted U. S. Maritime Commission "M" burgee for outstanding performance in production of triple expansion steam engines for Liberty ships at a ceremony at the Sunnyvale, Calif., plant July 23.

Admiral Vickery, vice-chairman of the Maritime Commission, who awarded the trophy, announced that engines were being turned out as fast as ships could be built, and that the first turbine engines to be manufactured on the Pacific Coast were now being turned out by the Joshua Hendy plant.

president of the North Bend Lumber Company and vice president of the Federated Industries of Washington, NAM affiliate, speaking at the Seattle meeting said, "I wonder how many of my fellow industrialists are fully aware of the practical aid given our large airplane manufacturers by the far-sighted and practical instruction given in aero-dynamics at the University of Washington. . . .

"In contrast, are you educators aware of the fact that increasing numbers of our large industrial plants are becoming laboratories for scientific research? That great sums are being spent by the so-called 'practical-minded' factory owners for advanced study? In 2,300 industrial laboratories more than 65,000 men of science are working on the development of new products which will help to keep America profitably employed after the emergency."

He also called attention to the state college's research leadership in making Pacific Northwest coal and coke available for steel plants of the West, the pioneering done by American industrialists in social security.

Charcoal Plant Will Serve Alloy Factory

Coast Carbons, Inc., of Tacoma, will daily produce between 35 and 50 tons of charcoal from waste wood scraps of nearby lumber mills, upon completion of its new plant now under construction. It is being supervised by James E. Louttit of Tacoma, organizer and principal owner, formerly with the Ohio Ferro-Alloys Company which he served as resident engineer on construction of its Tacoma plant.

The output will be used at the new Ohio Ferro-Alloys plant now being erected at Wenatchee. Its original location was planned for Tacoma but compliance with the government order requiring such new industries to be situated 200 miles from the coast, shifted it to a site close to the Puget Sound Power & Light Company's Rock Island power plant, near Wenatchee.

It is understood that creation of the new charcoal carbon plant is the result of Louttit's method of making charcoal in a fraction of the time heretofore involved in its production.

WESTERNERS AT WORK

More Recognition By U. S. Chamber

ALBERT C. MATTEI's election as a vice president of the United States Chamber of Commerce, following closely that of Eric A. Johnston's of Spokane as president, indicates the increasing recognition being given western industry and industrialists. Mattei is president of the Honolulu Oil Corp. of San Francisco.



ALBERT C. MATTEI
U. S. Chamber Vice President

Western directors appointed were: Edgar B. Jessup, president, Marchant Calculating Machine Co., Emeryville, Calif.; W. S. Rosecrans, president, W. S. Rosecrans, Inc., Los Angeles, Calif.; James W. Spangler, vice president, Seattle First National Bank, Seattle, Wash.; E. W. Demarest, president, Pacific National Lumber Co., Tacoma, Wash.; Hamilton F. Corbett, vice president, Corbett Investment Co., Portland, Ore.

★ ★ ★

Ray D. Nelson has been appointed state organization officer for the War Price and Rationing Boards in Washington. He will have complete charge of rationing board organization throughout the state.

For the past twenty-one years, Nelson has been with the Chevrolet Motor Co., and recently was branch manager for the Seattle area. He is well known throughout the state.

★ ★ ★

L. H. Hinckley has been appointed supervisor of the Rocky Mountain District Mining Branch, WPB, with headquarters in the Kittredge Bldg., Denver, Colorado. Formerly, he was general superintendent of the Tuba Mines at Tagkawayan, Taya-bas, in the Philippine Islands.

Dr. Merrill K. Bennett has been named executive director of the Stanford University Food Research Institute. An economist with the institute, the doctor has been its executive secretary since 1933, although he first joined in 1923 as a junior research associate.

Recently, Dr. Bennett returned from Hawaii where he went a year ago to study the food supply of Hawaii with particular reference to competition between wheat and rice. Following Pearl Harbor, he was drafted in the Office of Food Control as adviser and chief statistician for the office.

★ ★ ★

Henry E. Kingman has been elected executive vice president of Solar Aircraft Co., San Diego, Calif. He will assist in the management of Solar's three manufacturing plants, two of which are in California. At the same time, Ray E. Craig was appointed comptroller. Two vacancies on the Board of Directors were filled by Herbert F. Sturdy and Ralph E. Rollins.

★ ★ ★

Alexander MacDonald, Los Angeles attorney, has been appointed deputy regional director of WPB activities in the Los Angeles area.

★ ★ ★



EDGAR B. JESSUP
U. S. Chamber Director

★ ★ ★

Preston Hotchkis, president of the California State Chamber of Commerce, announces the appointment of chairmen of nine state-wide committees as follows:

Dr. Robert Gordon Sproul, president of the University of California, natural resources; **A. T. Mercier**, president of the Southern Pacific Co., research; **A. J. McFadden** of Santa Ana, agricultural; **Harry A. Mitchell**, president of the Sacramento Northern Railway, highway; **A. C. Mat-**

tei, president of the Honolulu Oil Co., industrial; **Alfred J. Lundberg**, president of the Key System, finance and budget; **Stuart O'Melveny**, president of the Title Insurance & Trust Co., social security; **Sidney M. Ehrman**, San Francisco attorney, taxes; and **A. E. Goddard**, Thomson-Diggs Co., travel and recreation.

★ ★ ★

W. M. Snow, mining engineer, has been placed in charge of the manganese and chromium stockpile purchasing for the Metals Reserve Company in Phoenix, Arizona, with headquarters at 325 Heard Bldg. **Roy E. Howe**, formerly general superintendent for the Cananea Consolidated Copper Co., has been named to a similar position with headquarters at Deming, New Mexico.

★ ★ ★

M. K. Anderson, general manager of the Alloy Steel & Metals Co. of Los Angeles will serve on an advisory committee which will be a liaison unit between OPA and manufacturers of steel castings, advising on any problems or questions which may arise in respect to prices.

★ ★ ★

Gilbert G. Budwig, president of Aircraft Components, Inc., announces new appointments and executive staff changes necessitated by increased volume of business.

Paul Eskew has been appointed manufacturing coordinator, and **John P. Persons** succeeds him as superintendent of the exhaust collector division; **William Anderson**, assistant director of production planning; **L. C. Marsh**, director of outside production; **Verne Castle**, superintendent of parts production; **William Millar**, production engineer; and **Fletcher W. Pomeroy**, director of plant protection.

From outside the company, **A. R. Perl** has been imported from Solar Aircraft Co. as director of production planning; **V. Ray Bennett** is the new plant manager, coming from Clarke Aero-Hydraulics, Inc.; and **Don Fulsher**, formerly with Douglas Aircraft Co., has been appointed chief inspector.

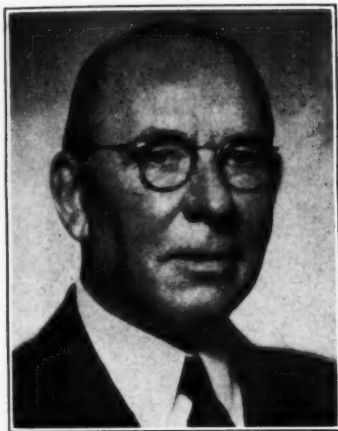
★ ★ ★

H. S. Worthington, formerly general superintendent of The Columbia Steel Co. plant in Pittsburg, Calif., has been appointed assistant vice president with offices in San Francisco. He is succeeded by **Joseph A. White** who was his assistant. **J. D. McCall** steps into the position of assistant general superintendent. At the Torrance, Calif., works, **Harlow Dotson** takes over as assistant general superintendent.

Colonel Francis M. Smith has been appointed regional manager of the Bureau of Industrial Conservation and will direct the collection of strategic scrap war materials in the eight far western states. Prior to accepting his present position, Colonel Smith, an army engineer, was State director of the WPB contracts distribution program. He was formerly head of the Maywood Glass Co., and at one time the youngest roadmaster ever to work for the Northern Pacific Railway.

☆☆☆

D. C. Jackling, outstanding figure in the mining world, heads up a copper organization that took the risk of exhausting its supply of metal by going all-out on war production when copper first was officially recognized as a critical material more than



D. C. JACKLING
Speeds Copper Production

a year ago and a ceiling price fixed on it by the government. He is president of Utah Copper Co. and Nevada Consolidated Copper Corp., and managing director of mining operations of the Kennecott Copper Corp. Output of his group, which accounted for 47 per cent of the United States production in 1941, has been increased tremendously since it entered the war effort.

☆☆☆

Ray L. Riley, State Railroad Commissioner, has been appointed transportation administrator for the Los Angeles metropolitan area by Mayor Fletcher Bowron at a recent meeting of Southern California mayors.

Selection of a transportation administrator was suggested to Mayor Bowron by Joseph B. Eastman, chief of the Office of Defense Transportation.

The area which Riley will cover includes Los Angeles County and parts of Orange and San Bernardino counties. As a member of the Railroad Commission, Riley has studied the transportation of war workers in this area and knows the problem thoroughly.

David Fleet, son of Maj. R. H. Fleet and for several months past assistant general manager of Consolidated Aircraft Corp. at San Diego, has been appointed executive vice-president of Vultee Aircraft, Inc. Mr. Fleet, a native of Montesano, Wash., has been active at Consolidated for several years. He also will be direct assistant to Mr. Williams, vice-chairman of the board, and will have general supervision over all operations of the corporation.

☆☆☆

Benjamin C. Allin, California engineer, has been commissioned a lieutenant-colonel in the U. S. Army. He will be assigned to duty at Fort Mason. Colonel Allin built and developed port facilities throughout the world, among them the Port of Stockton, Stockton, Calif.

☆☆☆

Frank C. Lathrop, San Francisco, retired veteran west coast railroad official, has accepted appointment as a member of the solid fuel advisory war council.

Lathrop will be one of the two representatives of the general public on the war council and fills the vacancy created by the resignation earlier this year of Louis J. Brann, Lewiston, Maine, former governor of Maine.

☆☆☆

Dr. Paul M. Hunter has been appointed vice president of Western Research Laboratories, according to an announcement recently made by Kenneth Walsh, president of the company. He also will serve on the board of the Western Electrochemical Co., an affiliate organization. Both companies are operating wholly in the war effort.

Dr. Hunter has been engaged in research of X-ray development for testing stress parts for the aviation industry. In the picture, he is shown with one of the company's portable X-ray units.



DR. PAUL M. HUNTER
X-Ray Research Specialist

Aside from X-ray research, the doctor is one of the country's outstanding golfers. He has won the California State title twice, has been Southern California champion twice, and in 1925 was Bobby Jones' mate on the Walker Cup team.

Edward J. Duggan has been named Northern California District manager for Westinghouse Electric Supply Co., with headquarters in San Francisco. He will have charge of all operations of the com-



EDWARD J. DUGGAN
Westinghouse District Manager

pany in Northern California, Eastern Nevada, Utah, Idaho, Montana and Western Wyoming. Mr. Duggan was transferred here from Salt Lake City where he was branch manager since December, 1938. Previous to that, he was stores and offices operations manager for the same company in San Francisco.

His predecessor, William M. Jewell, has been transferred to Detroit, Michigan.

☆☆☆

Edward Bransten and Philip Schwartz, two San Francisco industrial leaders, have been appointed to War Production Board Industry Advisory Committees. Mr. Bransten, president of the MJB Coffee Co., will work on the committee for the tea industry, and Philip Schwartz of the Pacific Diamond "H" Bag Co. on the bag industry committee.

☆☆☆

Louis Traung and B. H. Rehrig have been appointed to WPB industry advisory committees. Traung of Stecher-Traung Lithograph Corp., San Francisco, was named to the Printing and Publishing Transportation committee; and Rehrig, of Rehrig Mfg. Co., Los Angeles, to the Milk Bottle Crate Industry committee.

☆☆☆

John C. Semple of Grants Pass, Ore., has been appointed project manager by the U. S. Bureau of Mines for a survey of strategic materials in eastern Washington and northern Idaho. He will make his headquarters at the bureau's office in Moscow, Idaho.

☆☆☆

A. R. Lintner has been appointed Pacific Coast director of the War Shipping Administration. He will be assisted by E. J. Bradley. Both men will make their headquarters in San Francisco.

Test Tube Work Precedes Workers' Surge Westward

By ARNOLD KRUCKMAN

WASHINGTON, D.C.—Since it is expected that between 7,000,000 and 8,000,000 workers will be transferred in the next 18 or 20 months to the Pacific West from the middle west and the south, where the cessation of non-war industries is throwing thousands out of employment,



there will be heavy demands for shelters.

Consequently much interest attaches to the "test tube" dormitory for war workers to be built at Vallejo, California, by the Federal Public Housing Authority. It will serve as the model after which other dormi-

tories for war workers will be patterned.

Probably the largest number of these war workers will locate along the Coast, from Vancouver to San Diego, for shipbuilding, boatbuilding, airplane production and their auxiliary and corollary industries. There is also bound to be a tremendous increase in the activities among the smaller boat yards, of which you have many along the Coast. Some of the greatest speedboat builders are out there. The foremost speedboat architect in America makes his headquarters in Los Angeles.

We probably know more about Dair N. Long here in Washington than you do. He plans many of his amazing 60-miles-an-hour craft out there and has built some of them on this Coast. Apparently some of them may be built somewhere out there in the future.

You also have one of the most famous boat builders out there, known for years wherever boat racing men gather. The very mention of the name of Matt Walsh always evokes tributes to his genius. Men who own yards like the Walsh yard unquestionably will build some of the 1,000 swift boats for which Congress has just given the Navy approximately a billion dollars.

Many are confident these boats, with the airplane, will drive the submarine from the ocean. No submarine yet built can combat on equal terms with these amazing speed boats. Their accomplishments in the battles with the Japanese already are classic. And they can be produced rapidly.

FPHA already has announced large dormitories will be built at Los Angeles, at Sausalito, Calif., and Richmond, Calif., and at Portland, Ore. There will be additions to others already planned, and it is probable others will be built at communities such as Long Beach, in the San Diego area, and up in the Puget Sound section.

They will be built in the neighborhood of aircraft plants as well as in shipbuilding areas. Some are expected to be built in the back country, as far back as Salt Lake City, and up in Idaho. They will probably average somewhere between 3,000 and 5,000 persons capacity.

You already have one up at Vancouver, Washington, that serves the workers of the Kaiser shipyards. Like the shipyards and their magic, this dormitory, built under

One of the best-informed writers at the Nation's Capital, Arnold Kruckman, presents each month authoritative comments on political developments and their practical application to industry of the West. Any reader who wishes additional information may write to him directly, using business letterhead, at 1120 Vermont Avenue, N.W., Washington, D.C. Inquiries will be answered free of charge. You also are invited to contact him personally in Washington. Copies of pending congressional bills may also be obtained free of charge.

supervision of the Government, is a sort of miracle job. Housing 2,000, at present, it was built in 39 days and was placed on a swamp transformed by modern scientific methods. A half-mile east of the shipyard, the workers walk from the dormitory to their job over a 20-foot boardwalk.

This great dormitory already has some of the features which have been placed in the Vallejo enterprise. The rents at Vancouver may be a yardstick for the rents that will be charged elsewhere. A single room costs a worker \$5.00 per week; in a double room each person is assessed \$3.50 per week.

An addition to the Vancouver dormitory is now under way. Its expanded facilities are expected to be ready within a month, and will house another 3,000 persons. Vancouver will thus have a dormitory for 5,000.

Each person in the dormitory room has a bed, a chair, a chiffonade or chest, a mirror, ash tray, lamp, and waste basket. If the tenant is a woman she also gets a dresser. A double room, in addition, has an ice refrigerator, a dinette table, dinette chairs, an electric hot plate, and a shower curtain unless the apartment is equipped with a shower. All bed linen, blankets, and hand and face towels are furnished in abundance.

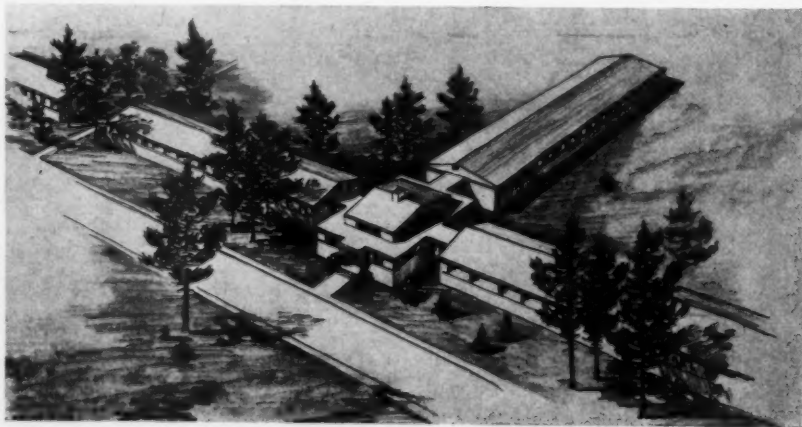
Purchasing of all these supplies is done by the Mass Purchasing Section of FPFA, Longfellow Building, Washington, D. C. It buys on bid contracts, and it likes to deal with local suppliers near the dormitory.

The Smaller War Plants Corporation is now actively in business. It is headed by Lou S. Holland of Kansas City, head of the Double Rotary Sprinkler Corporation. Contrary to the general impression, even in Washington, that the Corporation was designed only to help small business to convert to war work, we now know that the law contains a clause which enables the Corporation to make loans to small firms which cannot engage in war work.

Apparently Congress had the idea that there are many small firms which are the core and mainstay of groups of workers and of one-business towns, and that such industries, useful in themselves, should be preserved. Congress very definitely intended that the law should operate to keep

(Continued on page 18)

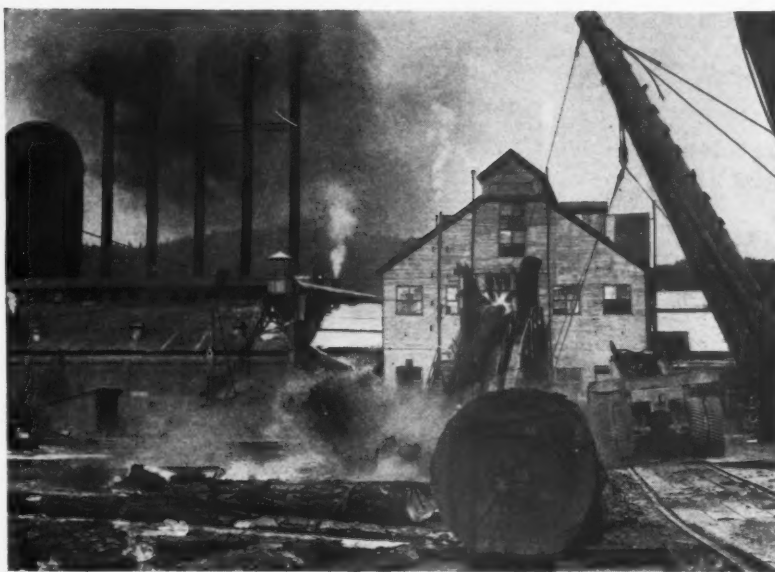
• Bird's-eye view of a basic dormitory unit to be built at Vallejo, California, as one of the temporary shelters for war workers included in government housing program.



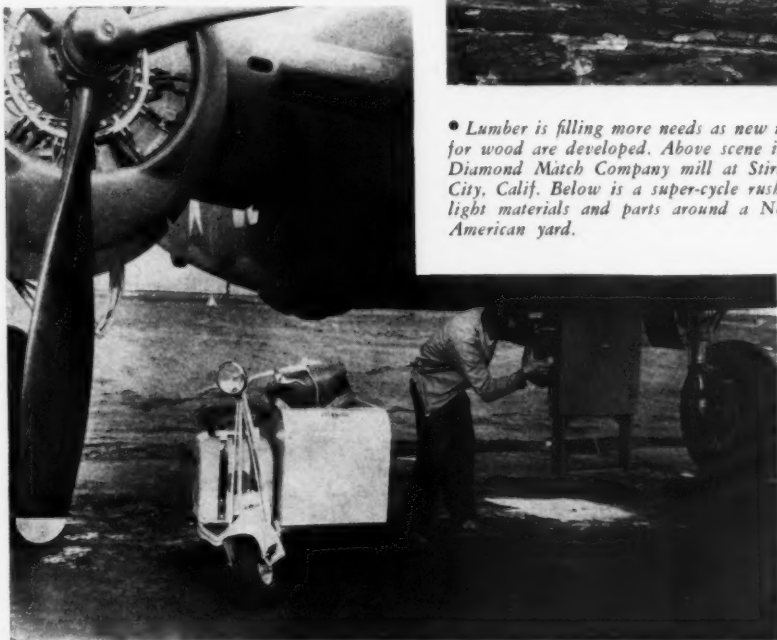
WESTERN INDUSTRY IN PICTURES



• Familiar display of 10-ton section of the San Francisco Bay Bridge suspension cable to be scrapped in metal drive. Patricia and Sbeila Herliby won't be scrapped, however.

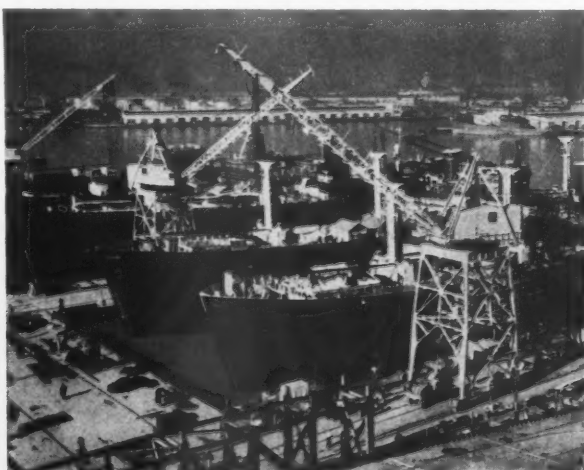


• Lumber is filling more needs as new uses for wood are developed. Above scene is at Diamond Match Company mill at Stirling City, Calif. Below is a super-cycle rushing light materials and parts around a North American yard.



• No, this isn't Robert Benchley, it's D. D. Remund, a florist who became a chipper in a shipyard. A sample of the way war changes vocations.

• This California Shipbuilding Corporation yard at Terminal Island at the right (below), delivering 15 ships in a single month, looked like the scene at the left only a little over a year ago. West Coast shipyards are breaking many records.



(Continued from page 16)

Statement of Condition

At the Close of Business June 30, 1942

NOT INCLUDING TRUST FUNDS

Resources	
CASH	
On Hand and with Federal Reserve Bank	\$61,210,154.17
With Other Banks	24,935,397.13
	<u>\$86,145,551.30</u>
INVESTMENTS (at not exceeding market value)	
U. S. Government Securities	194,780,662.91
Other Bonds	21,106,746.88
	<u>215,887,409.79★</u>
Stocks and Other Securities	667,660.79
(Including \$450,000.00 Stock in Federal Reserve Bank of S. F.)	
LOANS	
Loans and Discounts	40,811,346.79
Loans on Real Estate	7,629,681.28
	<u>48,441,028.07</u>
Customers' Liability for Credits and Acceptances	5,515,386.54
Bank Premises, Furniture and Fixtures	2,907,154.24
Other Real Estate Owned	552,966.52
	<u>\$360,117,157.25</u>
Liabilities	
DEPOSITS	
Demand Deposits	\$214,231,455.07
Time Deposits (Savings and Commercial)	114,857,075.60
Public Funds	5,948,400.18
	<u>335,036,930.85</u>
Letters of Credit, Credits and Acceptances	5,996,437.89
Foreign Acceptances and Bills of Exchange Sold with Our Endorsement	8,860.87
Reserved for Taxes	647,296.40
Other Liabilities	390,985.27
CAPITAL Paid in	9,000,000.00
Surplus	6,000,000.00
Undivided Profits	3,036,645.97
	<u>\$360,117,157.25</u>

★\$10,244,761.68 pledged to secure Public and Trust Funds

STATE OF CALIFORNIA }
City and County of San Francisco } ss.:

A. W. Kohner, Cashier of Wells Fargo Bank & Union Trust Co., being duly sworn, says he has a personal knowledge of the matters contained in the foregoing report of condition and that every allegation, statement, matter and thing therein contained, is true to the best of his knowledge and belief.

Subscribed and sworn to before me this 3rd day of July, 1942. Mrs. Emi Eggers Del Bono, Notary Public in and for the City and County of San Francisco, State of California.

Correct—Attest: Henry Rosenfeld, W. P. Fuller, Jr., Arthur D. King.

DIRECTORS

Sidney M. Ehrman
James Flood
*J. A. Folger
W. P. Fuller, Jr.
W. L. Gerstle
Clara Hellman Heller
*F. J. Hellman
*I. W. Hellman

Arthur D. King
Frank B. King
H. G. Larsh
Dr. Hartland Law
Samuel Lilienthal
E. C. Lipman
F. L. Lipman

Wilson Meyer
R. B. Motherwell
Henry D. Nichols
Henry Rosenfeld
R. S. Shainwald
Guy V. Shoup
Frank E. Sullivan
J. D. Zellerbach

*Is one of our 98 Directors, Officers, and Members of the Staff now on leave for wartime duty.

Wells Fargo Bank & Union Trust Co.

SAN FRANCISCO

Oldest Bank in the West—Established 1852

Member F. D. I. C.

Send for booklet—BANK BY MAIL

ghost towns and ghost industries, east and west, to an absolute minimum.

It is curious that neither Mr. Nelson nor his associates in WPB have said very much about these latent powers in the law. The tendency seems to ignore anything that will not contribute directly to war production. This drift is so marked that it is generally accepted here that many industries are apparently to be put out of business even though they do not use critical materials or use much labor that could be converted to war work.

One industry particularly has repeatedly been warned it would be put under strict limitations, and would be compelled to simplify its products and starkly standardize them, although the section of WPB which is familiar with its needs has flatly come out and said it uses nothing, (or next to nothing for which it could not use substitutes), that is needed in war production.

Under these circumstances, there is a general idea here that the purpose is to reduce the national economy to an absolute skeleton for civil needs, and to create a situation that will compel the ultimate consumer to invest his surplus cash in war bonds.

It is also assumed that simplification and standardization, under government supervision, within the war cartels, will lap over for considerable time into the period after the war.

If you wish information about the help you may be able to get from Smaller War Plants Corporation, write Mr. Samuel Abbot Smith, a member of the Corporation. He is vice-president of the Smaller Business Men's Association of New England, and understands the smaller man's problems very intimately and sympathetically. Simply address Mr. Smith in care of the Smaller War Plants Corporation, War Production Board, Washington, D. C.

Merchants, jobbers, wholesalers, and manufacturers, on the West Slope, who carry inventories of commodities or merchandise, will do well to get their records in good shape. After the fall elections are out of the way some form of inventory control is almost certain to be put into operation.

The Wholesale and Retail Inventory Policy Committee of WPB has been making a sweeping, if somewhat brief, survey during July and early August and meanwhile, to put a brake on any panic buying and to stop further excessive inventory accumulation, the Federal Reserve Board has asked banks and other financial institutions definitely to discourage unnecessary acquisition of civilian goods, by denying loans for such purposes.

To reach the new W. A. Bechtel shipyard at Sausalito, a bus system has been started with terminals in San Francisco determined by the number of workers in each section.

Records Broken In Employment

Continuing to break all records, California manufacturing industries in June, 1942, employed 608,000 factory wage earners. This represents an increase of 203,000 wage earners or more than 50 per cent over June, 1941, when 405,000 wage earners were employed and a gain of 26,000 or 4½ per cent over the 582,000 wage earners at work in May, 1942.

Together with office, clerical, sales, executive, technical and professional personnel, a total of 747,000 were employed in manufacturing establishments in California in June, 1942. This compares with 716,000 in May, 1942, and 512,000 in June a year ago.

Total factory payrolls increased 5.2 per cent between May and June to a level 86.6 per cent above June, 1941.

Wage earners in nondurable goods manufacturing industries numbered 149,000 in June, approximately the same as in May and slightly under June a year ago. The number of wage earners in durable goods industries, however, increased to 459,000 a gain of 6.3 per cent over May when 433,000 wage earners were employed in durable goods industries, and more than 80 per cent over the estimate of 255,000 for June, 1941.

Although nearly all war industries reported sizable gains in employment, the outstanding increase in June occurred in the shipbuilding industry.

Average weekly earnings in durable goods industries declined slightly to \$46.97 in June 1942 from \$47.33 in May but were above the average of \$37.41 for June, 1941. In nondurable goods industries they rose from \$33.33 in May to \$34.66. In June a year ago, average weekly earnings in nondurable industries amounted to \$30.17.

Weekly earnings in all manufacturing industries combined averaged \$43.93 in June, compared with \$43.71 in May and \$34.74 a year ago.

Average working time in June of 43.6 hours per week was the same as in May. In June of last year, weekly hours averaged 41.4.

Many firms reported making cash payments to workers in lieu of vacation, and reports were received from a large number of establishments indicating that wage increases were granted during the month to thousands of wage earners in many industries.

Merit Pennant is Awarded

United Air Lines' Boeing School Division at Oakland has been awarded a merit pennant for "outstanding service" in the training of Air Corps mechanics and technicians during the first six months of 1942.

The pennant, comparable to the Navy's "E" flag, was created especially by Major

General Walter R. Weaver for award to the Boeing School of Aeronautics. It will remain in the school's possession for six months and then will be reawarded to the technical training school performing the most meritorious service during the last half of 1942.

In addition to civilian instruction, the Boeing school currently is training as Air Corps technicians enlisted men selected from camps and barracks throughout the country.

Awarded Banner

General Metals Corporation, Oakland, has been awarded the Navy "E".

100,000 More Men

West Coast shipyards may hire an additional 100,000 men before the end of the year to meet their share of the U. S. Maritime Commission production goal of 2,300 oceangoing ships aggregating 23,000,000 deadweight tons, according to W. E. Waste, general manager, W. A. Bechtel Co. The new Marin shipyard alone will require 10,000 to 12,000 additional men before peak employment is reached.

Construction of another shipyard to build barges for the Navy will be started in Richmond by the California Steel Products Corp.



The ACID TEST

... the Acid Test of Quality is uniformity of standards—the ability to produce the same high grade products month after month.

... the Acid Test of Experience is the ability of the company to expand its facilities and improve its products to meet every new requirement.

... the Acid Test of Service is the ability to deliver merchandise when it is needed.

Stauffer has passed these Acid Tests for over 50 years in supplying the West with quality chemicals. Now expanding to meet the war effort, Stauffer continues to maintain the dependability in the Stauffer Victory Equation—

Quality + Experience × Service = Dependability

LOS ANGELES



SAN FRANCISCO

STAUFFER CHEMICAL CO.

LABOR

AND THE INDUSTRIAL WEST

Stabilization Parley For Aircraft Stalls

SESSIONS of the aircraft wage stabilization conference were to be resumed in Washington late in July, after a week of deliberations in Los Angeles earlier in the month terminated at the suggestion of Paul R. Porter, WPB wage expert. Porter said that all the facts, especially those concerned with insuring an adequate and stable labor force, had not been presented and should be the first order of business when the conference reconvened.

AFL and CIO representatives had asked for increases averaging 25 per cent, on a parity with shipyard workers and equal to the scale at the Ford Willow Run plant, but Richard Gilbert, deputy OPA administrator, bluntly told both the manufacturers and the unions that the government would not approve any raises other than to improve substandard conditions and that the government did not consider the wages of aircraft workers to be substandard.

Take It on the Chin

"Wage stabilization means no wage increases except to eliminate inequalities and sub-standards of living," he said. "Government will require that compelling evidence be produced before assenting to any increase.

"Under war circumstances, no group can improve or can avoid a reduction of its living standards except at the expense of other groups. Those groups which are actually on a bare subsistence level cannot in fairness and common sense be expected to take any cut in their standards of living. Quite the reverse, public policy requires that their standards be raised. But the rest of the people must accept curtailment of their living standard, each according to his capacity."

Union representatives contended that Gilbert's statement meant collective bargaining in the aircraft industry had terminated, and asserted that Fowler Harper, War Manpower Commission representative, had been "muzzled by someone." Harper later asserted that his decision not to present Manpower Commission views at Los Angeles was entirely his own, and that neither Leon Henderson, Paul V. McNutt nor Paul R. Porter had muzzled him.

Demands for pay increases call for advances ranging from 8 cents to 35 cents

an hour. In the lower pay brackets, an advance from the current rate of 60 cents an hour for beginners to a minimum of 95 cents, and for skilled labor an increase of 8 cents from \$1.52 to \$1.60 was asked.

Under present practice in airplane plants, beginners start at a minimum of 60 cents an hour and automatically each month are raised 5 cents an hour until a minimum of 75 cents is reached.

In addition to wage increases, labor also is asking for cumulative vacations and sick leave. The CIO wants elimination of multiple job classifications into three classes: Unskilled, semi-skilled, and skilled; that no wage reductions result as a result of the conferences; and a retroactive date at which wages agreed upon shall be effective, the CIO asking for July 6 and the AFL July 1.

Average weekly earnings in the Southern California area in May were \$46.75, average hours worked 46.9 and average hourly rate including overtime 95.6 cents, according to a statement submitted by the manufacturers. In comparison, the weekly average for all manufacturing industries in Southern California was \$43.97.

Agreements Promote Mutual Understanding

Comprehensive labor agreements between the Southern California Chapter of the Associated General Contractors of America and twenty-one building and construction trades unions affiliated with the American Federation of Labor have recently been completed for the second successive year as a major contribution by the construction industry to the efficiency and continuity of the war production effort in the West.

Covering all types of highway engineering and building construction in twelve counties of Southern California, the agreement establishes wages and working conditions for a period of one year. Principal features are the establishment of a 40-hour basic week, the principle of arbitration substituted for strikes, lockouts and jurisdictional disputes.

It recognizes the American Federation of Labor unions, which are parties to the agreement, as exclusive collective bargaining agencies, and provides that all employees shall be A. F. of L. members.

Since the first, and original, agreement was completed a little more than a year ago, supplement agreements have been concluded covering pipe line construction and multiple residential construction.

Another similar agreement has been concluded by the Southern California Chapter covering engineering construction in southern Nevada, and spurred on by these, a similar agreement has been completed between the Arizona Chapter of the Associated General Contractors and American Federation of Labor building and construction trades unions in that state.

The significance of these three agreements, stabilizing labor relationships in the construction industry of the Southwest, is that for the first time both employers and employees have made a genuine and sustained effort to secure a long-needed and much-desired respect for each other.

Truthful Picketing

California State Supreme Court has ruled, in the case of Magill Bros., Inc., vs. Building Service Employees' International Union, that picketing may not be conducted in a false or untruthful manner.

The facts were: The employer refused to sign a closed shop contract with the union, after which the union stationed pickets outside the bowling alley, who carried a sign stating: "This House on Strike. A.F.L." At that time no employees were on strike. The lower court found that the banner and signs carried by the pickets conveyed false and untrue information to the general public. In holding that this form of picketing is unlawful, the State Supreme Court stated:

"There can be no doubt that untruthful picketing is unlawful picketing. Cases involving the right of labor to picket peacefully have consistently held that the picketing must also be honest and truthful."

Union Security Clause

Where a "union security" clause is granted, the War Labor Board held in its wage decision in the Ryan aircraft case in June, the employees who are members of the union will have a period prior to a certain effective date within which they can resign from the union. But if they do not so choose, then thereafter they must maintain their union membership in good standing for the duration of the agreement or lose their jobs. Employees who are not members of the union, of course, are not required to join.

Allege Violations

Suit for \$8,228.66 wages and incidental transportation in behalf of 30 employees of the Hawaiian Constructors, a syndicate under contract to the War Department to build military projects in the Hawaiian

Islands, has been filed by H. C. Carrasco, State Labor Commissioner for California. The complaint charges that the workmen were required as a condition of employment to post a cash bond in violation of the California Labor Code, and further, that the employer failed to furnish return transportation to the workmen or to pay them for travel time as provided in the contract.

Longshoremen Agree To Enforcement of Discipline

Officials of the CIO Longshoremen's Union in San Francisco were praised by Paul Eliel, chairman of the Pacific Coast Maritime Industry, in a speech before the Commonwealth Club industrial section July 20, for their attitude in agreeing that the time had come for enforcing discipline upon recalcitrants, and for their "broad-minded and intelligent manner" in enrolling new members to meet the needs of the port.

He said their attitude in regards to the imposing of discipline in itself constituted a dramatic and spectacular change, and constituted an important accomplishment for the governing board that he represents.

Most of the longshoremen are willing and anxious to do a first rate job, according to Mr. Eliel, and recognize without reservation their obligation to their job and to their government. He said the trouble lay

with an irresponsible and highly individualistic minority. Willingness to expand registration almost without limitation ran counter to traditional union policy and consequently was a notable change in attitude.

Mass-Produced Planes And Different Autos

Mass-produced commercial planes and a new type of automobile with a much smaller and higher compression motor will follow the war, according to Frank W. Curtis of the Van Norman Machine Tool Co., past president of the American Society of Tool Engineers.

"A fuel many times more powerful than gasoline has been produced, which will require entirely new automobile engines because present designs are not able to use it," he said. "This fuel is of a very high compression type that will require a small, high-speed motor with a greater power per pound of weight than present motors.

"Since airplanes depend on lightweight motors, these engines probably will be used in the large number of small planes that will be produced after the war, so that a new era of civilian flying can be expected, especially with the thousands of army and navy trained pilots who will want low-cost aircraft of their own. The rapid strides made in the building of warplanes

have been made possible only under war emergencies, where speed has been so urgent. The mass-production methods will carry over to peace-time, so that we may expect the air to rival the road as a means of travel."

Plywood Sizes Are Simplified

Reduction of the number of sizes of moisture-resistant Douglas fir plywoods has been ordered by the War Production Board in order to create an additional production of about 20 million feet per month.

It is expected that the simplification practices ordered will result in a reduction of sizes from about 4,300 to approximately 300. The sizes permitted will satisfy all normal consumer demands, including war requirements, according to officials of the lumber and lumber products branch.

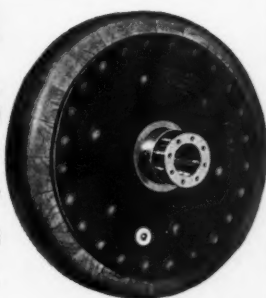
Special Unit

Nine employees of the Los Angeles branches of the International Harvester Company recently left for the east to join a special maintenance battalion of 859 men, composed entirely of employees of that company, for service with one of the United States Army's armored divisions. The unit will receive basic training at Camp Perry, Ohio, before going into active field service.

METZGAR END-WOOD WHEELS

- ★Easy-rolling, quiet, shock-absorbing and floor-protecting
- ★Take heavier loads than iron or rubber wheels!
- ★Unaffected by water, gasoline, oil and most chemicals
- ★Outwear iron, rubber or composition wheels!

Made from selected hard maple; furnished in diameters from 2½" to 20" and tread faces from 1" to 6" wide. Supplied as complete rigid or swivel casters—or as wheels only—with either anti-friction or patented end-wood bearings which are an integral part of the wheel and will never wear an axle out of round.



These patented wheels are saving vital rubber and steel in countless war production plants and can solve YOUR problems, too. For full particulars, write or wire:

(An A-I-J priority or better is required for wheels with End-Wood bearings, and A-I-B or better is required for wheels with Hyatt roller bearings.)

A. S. LINDSTROM COMPANY
866 Folsom St. San Francisco

REPRESENTING
METZGAR COMPANY
GRAND RAPIDS, MICHIGAN
Makers of Wheels, Casters, Cable Dollies and Gravity Conveyors



Heat-treating solves the problem of fast production

Increased loads and speeds of modern gearing call for gears made of alloy-steels, heat-treated to give maximum results. The Johnson Gear heat-treating department is fully equipped with gas and electric furnaces—quenching tanks and automatic electric recording instruments that fully guarantee each step of modern heat-treating. Steel ordered to exacting specifications—test-pieces carefully checked to insure proper treating—all heat-treated according to standard practices.



JOHNSON GEAR & MANUFACTURING CO., LTD.

MAIN OFFICE AND WORKS: BERKELEY, CALIFORNIA

Steel Shortage Provides New Opportunity for Wood

SHORTAGE of steel for industrial structures, a handicap to industrial growth in eastern territories accustomed to depending on metal, promises in the West to become an opportunity for uninterrupted progress and also for further utilization of its own vast timber supply. This is through the use of wood.

Of the necessity for improved methods of using wood, so as to take advantage of its comparative cheapness and yet have the structural strength of steel, the U. S. Bureau of Standards, in a report entitled "Materials Improvements," says:

"Wood continues to improve its standing in the engineering field. Grading, standard working stresses for structural timber, better practices in the preservative treatment of wood, more efficient timber joints, the introduction of laminated construction and an increasing use of structural plywood are some of the factors which have brought this about. . . . The use of metal dowel connectors for timber framing continues to grow."

The metal dowel connector referred to was developed through the foresight of the National Lumber Manufacturers Association

in setting up the Timber Engineering Company as a subsidiary to develop and promote improved technique. The latter organization evolved the Teco System of timber construction, now widely used by structural engineers, which is based on the Teco timber connector.

Wood's weakness has been the joint, because to gain the required strength there entailed using much heavier wood than was needed elsewhere.

On the other hand, wood is a structural material more available than many. Pound for pound, it is one of the strongest materials; it is easily worked by local labor; it adapts itself to varying conditions more rapidly than other materials; impact up to 100 per cent can be ignored, which is not so in other material; allowable working stresses may be increased a greater percentage for wind loads than for any other structural material; and structures made of it are easily altered to meet new use-conditions.

Until the development of the connector, expensive metal fittings were required. Bolts transmitting loads from one piece to another were used with low design stresses,

because of the concentration of load on a relatively small portion of the wood—that surrounding a bolt and only a short distance in from a contacting surface. The result was so much face area required at a joint in order to place all the needed bolts, that between joints there was much more wood than necessary to carry the load. Over-design is never economical.

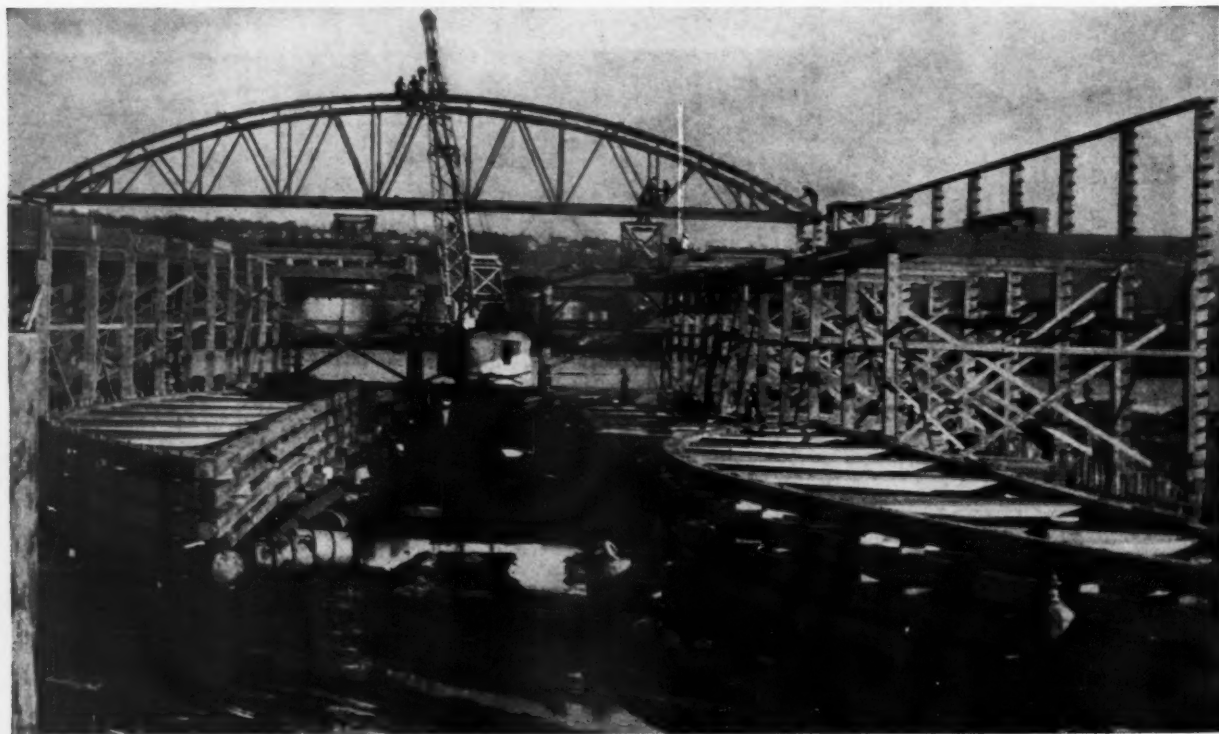
The first step, then, was to strengthen the offending joint. This was accomplished by magnifying the area available around a bolt with a ring, concentric with the bolt and extending half the depth of the ring into each of the mutually contacting surfaces. Splitting the ring at some point in the circumference produced even greater load capacity because of bearing against both the inside and outside walls of the groove.

Thus, from the simple expedient of placing the metal where it counts the most, a new system of construction came into practice.

This system dates back to 1933, and it has been used in more than 14,000 light and heavy frame structures since then. In normal times there is a saving of 20 per cent in the use of wood over steel, but since the advent of the war industries and the consequent steel shortage, wood has not only the advantage of economy but of availability.

Either prefabrication at a distant plant or fabrication at the site can be employed, and unskilled and untrained labor can easily fabricate or erect it. Trusses for

• Mold loft of McEachern Shipyard at Seattle in its early construction stages, showing 130-foot roof trusses in foreground awaiting erection. Truss in background already up.





• Close-up view of timber connectors used at the big Val Vita Food Products cannery at Fullerton, California. Strength at the joints enables wood to compete with steel construction.

the Wichita factory of the Beech Aircraft Company, covering an area of eight acres, were fabricated in Portland, transported by rail to Wichita and erected within 60 days from receipt of the order. Roof trusses for the mold loft of the Oregon Shipbuilding Corporation were delivered within eight days from receipt of the order, and erection completed by only four 8-hour shifts of workmen. Fourteen roof trusses in the mold loft of the West Basin plant of the California Shipbuilding Company, Los Angeles, were erected in 5½ hours of working time.

Prefabricated timber construction produced the roof structure of the 170 x 400 foot plate shop at the Todd-California Shipbuilding Corporation yard at Richmond one day ahead of schedule, winning the contractors a business. This giant structure was originally designed for steel construction, traditional for these buildings, but the shipbuilders found themselves caught in a bottleneck when steel fabricators were unable to make delivery.

Other shipyard jobs include the mold loft of the Shipbuilding Division, Willamette Iron and Steel Corporation, Portland Commercial Iron Works, also of Portland, Tacoma shipyard of Seattle-Tacoma Shipbuilding Corporation, Port of Portland drydock, and Associated Shipbuilders.

Use of two clear-span 47-foot trusses placed end to end for a 96x257 foot car-loading dock by Red River Lumber Co. at Westwood Calif., which left floor space unbroken except for a single center line of 21-foot posts started this company out on further applications. One of these is an 84 x 800 rough lumber shed completely free of posts, thus allowing a traveling crane to carry a load from one end to the other without obstruction. Since exterior support for the sidewalls would have meant loss of valuable ground area, the structure was supported internally by trussing the 44-foot wall posts and the 32-foot posts

supporting the crane track. The connector system allowed trusses posts to be built up from relatively small timber without sacrifice of strength.

Transportation And Maintenance Conference

The annual west coast conference on automotive transportation and maintenance of the Society of Automotive & Aeronautical Engineers will be held at the Biltmore Hotel, Los Angeles, August 20, 21 and 22. "Win the war transportation" will be the general topic.

ODT topics, such as eliminating waste in transportation, the tire situation, safety, reclaiming of worn parts, will be taken up August 20. Roy O. Long, manager of the Los Angeles ODT office, Paul D'Orr, rationing administrator, Robert Miller, safety fleet engineer, and Ellis W. Templin, automotive engineer of the L. A. Dept. of Water & Power, will be the speakers, supplemented by W. J. Cumming, chief of the ODT maintenance section at Washington.

Training of drivers and mechanics for army equipment, management and maintenance of army equipment under combat conditions, with army speakers, will be on the program for August 21, with demonstrations of army equipment and of welding, plating and metal spraying held on August 22.

Sponge Iron Venture

A pilot plant for the manufacture of sponge iron, with a five-ton daily capacity, is being completed at Cascade Locks, Oregon, four miles below Bonneville Dam, by the Electro Thermic Reduction Company. Ultimate capacity of the project is expected to be 250 tons daily. Raw material will come from low-grade ore in the Scappoose and St. Helens regions and from the iron sands of the Columbia River.


Trailers To Haul Shipyard Workers

Adaptation of drive-away equipment formerly used for transporting new automobiles from assembly plants to dealers, and building of special trailer busses, are two of the means soon to be used for mass transportation of war workers to shipyards and other large plants.


Robertson Transit Co., formerly in the drive-away business, have been granted authority by the California Railroad Commission to operate converted units to serve California Shipbuilding Co. on Terminal Island from Western and Manchester avenues in Los Angeles. They have mounted a bus body on a truck chassis, which will tow a semi-trailer, the combination carrying from 140 to 150 workers seated and standing. The firm is understood to have ten units awaiting conversion. If rubber cannot be obtained, it is proposed to use flanged rims on the wheels for rail travel.

Two of the largest commercial trailer manufacturers, Trailer Company of America and Fruehauf Trailer Company, have plans for entirely new equipment. The former proposes a semi-trailer with a herringbone seating arrangement which will carry 85 seated and 20 standing, a total of 105. Fruehauf's idea is a semi-trailer bus with bench type seats on each side of the coach with a row of back to back seats down the middle, seating 63 passengers and holding 35 standees, a total of 100.

Railroad Commission rules against trailers on passenger busses have been relaxed to permit the proposed types of vehicles, provided there are such safeguards as 6 foot 2 inch aisle head room, emergency exits, substantial trailer hitches, and break-away valves on the braking system.



STAINLESS
STEEL
WELDING
RODS



1845 EAST 57th ST. LOS ANGELES, CALIF.
TELEPHONE KIMBALL 2508

"United We Produce" Say Pabco Personnel

PARAFFINE'S method of getting its 1,500 employees in the Pabco plant at Emeryville, California, "production conscious," through its labor-management Victory Production Committee, begins at the time gate.

There a high sand-bagged barbed-wire trench, bearing the sign "Production is a front-line trench—let's keep it that way," brings home the individual importance of each Pabco man and woman.

In addition to the production trench, the Pabco Victory Production Committee has done a good job on initiating its "Got A Feather In Your Hat?" campaign which awards red feathers to each employee turning in production suggestions. All over the plant red feathers are now cropping up, showing clearly that the spirit of the production drive has been brought home.

Employee production suggestions in one short month aided in some amazing production gains, through increased labor efficiency; they helped conserve machinery, and eliminated much production and distribution red tape.

All nine divisions of the Pabco plant contributed to the labor-management representation on the Victory Production Committee which is the focal organizational

head of the drive. As each "Red Feather" production suggestion passes from division subcommittees to the general committee, this group of experts—management, foremen, workers, passes on its worth by applying one standard of judgment. "Will this production suggestion increase our output?"

When employee suggestions are put into actual plant operation, the author is rewarded further with Pabco "V" buttons which include the highest award of all, a diamond "V" button for those who have had five production suggestions put into operation within the plant.

In addition to the button awards, the regular plant award system of cash recognition for practicable production suggestions remains in effect. These days, however, it is noticeable that the cash incentive is proving of secondary importance in the minds of those turning in production suggestions.

To encourage and inform employees of the most vital part of the drive—the enlistment of individual responsibility in seeing to it that each job is done in the best possible way—posters which have been developed by the General Victory Production Committee of The Paraffine Cos., Inc.,

• *Production consciousness for Paraffine employees begins at the time gate, and recognition of participation in the war effort seems much more important to them than cash awards.*



In one month's operation of the Pabco Victory Production campaign, the following records have been accomplished:

A large government order of paint was produced in 50% less than normal production time.

Shipping Department labor efficiency increased 12% over the average of the first four months of the year.

Changes and improvements in shift starting times and a program for employing women to replace men in certain jobs has been stepped-up by employee suggestions.

Available labor supply has been greatly increased as a result of employee suggestions which made possible quick, on-the-job inter-departmental and inter-union transfers without slowing down of production.

Floor Covering Department production rate of vital Government orders was nearly doubled due to increased labor efficiency resulting from planning of supervisors who were directly aided by employee suggestions.

With the results in mind, the most encouraging factor of all is the statement of the labor-management Production Committee itself: "The program has just started."

have been placed throughout the plant.

In addition to the posters which urge contribution of suggestions, pooling of transportation, conservation of rubber, there is one presentation in particular which catches the eye. Pictured marching between two khaki clad doughboys is a third boy in white outline. Above is a sign: HE MAY BE ONE OF OUR BOYS—LET'S GIVE HIM ALL WE'VE GOT!

Since each employee can make or break a small link in the complicated chain of national production efficiency, the Victory Production Committee has keyed its campaign throughout to the bringing home of this realization. Although the 1500 men and women in the Pabco plant are not making guns, airplanes, or ships, they realize that without 1000 gallons of paint, ship yard workers would not be able to complete a Liberty ship on sailing schedule, or an Army Cantonment contractor would lose precious time waiting for tons of roofing materials. And so on, ad infinitum throughout the other company products of floor-coverings, building materials and special items.

The Pabco "Got A Feather In Your Hat?" suggestion campaign is not for union workers alone, or for management, but for both. Each day in the plant production sub-committees are clearing the way for the General Production Committee to act. While problems of production are fresh in the mind of committeemen, sessions are held between shifts, at lunch hours or after work hours to study production problems, talk over employee suggestions and initiate the plans for greater volume right at the production line itself.

KEY TO UNBROKEN OPERATION

Safety Work Reduces Both Hidden and Direct Costs

By H. D. ASPLAND
Associated Indemnity Company
San Francisco

MAN hours of skilled or experienced workmen lost from accidental causes virtually are just that much time and production donated to the enemy in our present war effort.

The key to this situation is the safety engineer. If he is given the opportunity and authority when construction of the plant is begun, he can prevent most of the serious accidents and reduce accident frequency to a great extent.

His importance is indicated by the fact that in proportion to the demand, the safety engineer is the hardest to obtain of any class of specialist. It shows how quickly the available supply was used up at the start of our big war industries, and also is an excellent indication of the prime importance placed on safety work in all government construction and plant work.

Perhaps one of the principal features most often overlooked regarding the safety engineer's work is the reduction in the hidden cost. In this we do not mean in dollars and cents entirely.

We have all been in plants or on construction jobs where a serious accident or a fatality had occurred. The entire job, particularly the immediate work where the accident has occurred, is slowed down. The bad word spreads throughout all of the work and there is needless talking and discussion of the accident, how it occurred, etc., which may continue throughout the shift.

This not only is conducive of other accidents from a more or less jittery state but there is also a great deal of actual productive time lost. It used to be an old custom in the sawmills that after a bad accident or a fatal case the mill usually shut down for the rest of the day. This of course was when time was not as important as it is at the moment.

Not only the hidden cost noted above is great, but there is also usually a lot of equipment and material that is lost in the accident. This must be cleaned up, salvaged and replacements made to continue the work which was being done before the accident occurred.

Direct financial savings to the government through careful safety engineering have been possible on large construction jobs, in shipyards and other plants despite the emergency conditions prevailing and the exhaustive 24-hour effort. The War Department expects not only to save as much money in premiums as possible, but

also to provide complete coverage under the laws of the states in which the jobs are being carried on. In many cases there has been full cooperation of the safety departments of the various government agencies with the contractor and the insurance carrier.

A new type of safety engineer has had to be developed quickly from the men available for our new high-pressure jobs. In the usual peace-time casualty business, the safety engineer has had the opportunity of long familiarity with the insurance business and with the type of work being done by the firms that are insured, and is a general service man responsible in a measure for the loss ratios developed, particularly by the larger insureds.

For the new situations, however, the men available frequently have not had wide experience, and the job has to be streamlined to fit the particular work at hand. For example, in our large shipbuilding yards there may be a crew of 30 safety engineers employed on all of the three shifts, who have been selected for their ability and interest in their own work.

They have to learn very quickly how to prevent the definite hazards that result if the material is not handled properly and the work not done in accordance with the best safety methods. These hazards must be recognized and dealt with promptly, because there is no second chance. If they are immediately cleared up, probably there will be no outstanding bad accident, but there is no precedent and the engineer must use his initiative.

Surplus Materials Exchange Started

A surplus materials exchange has been started by the Industrial Department of the Los Angeles County Chamber of Commerce at 1151 S. Broadway, Los Angeles.

Maintenance and operating equipment for all kinds of manufacturing establishments and public utility plants will be listed, indexed and cross indexed, as a means of assisting buyers of such supplies in finding needed parts not now available at other sources because of shortages, priorities and other war restrictions.

The Exchange is restricted to listings of products which require critical materials, such as electric motors, storage tanks, valves, pipe, pipe fittings, wire, air and gas compressors, meters, transformers, steel shapes, etc. Fifteen large public utilities and public service companies have listed their surplus materials.



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**Superb accommodations,
fine cuisine, and
distinctive service await
today's travelers at
this city's largest, best
located hotel.**

★
**1000 ROOMS • 1000 BATHS
FROM \$4 SINGLE • \$6 DOUBLE**

**HOTEL
ST. FRANCIS**
OVERLOOKING UNION SQUARE
SAN FRANCISCO
MANAGEMENT DAN E. LONDON

Loading Heavy May Mean More Breakage

Compulsory maximum loading of freight cars, as a measure of car conservation, disregards entirely the factor of increased loss and damage to freight loaded in accordance with the prescribed rules, according to A. C. Street, traffic manager of Safeway Stores, Inc., Oakland.

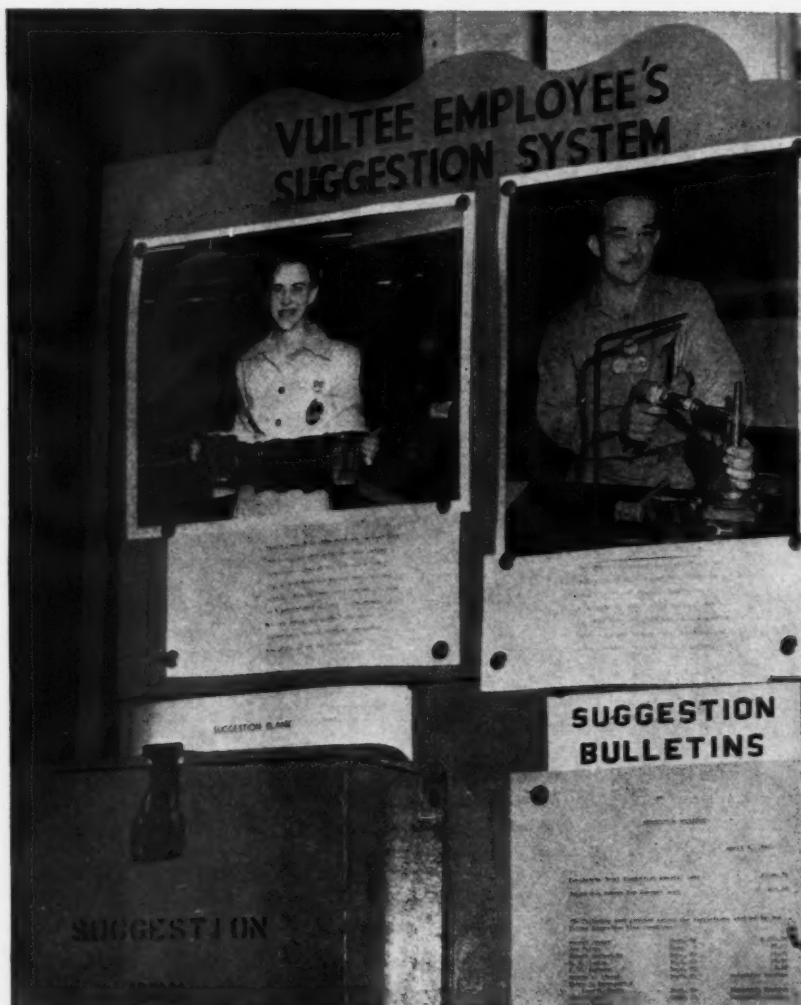
"Car conservation and maximum loading is both foolish and more costly than the waste of equipment it is designed to prevent, unless due consideration is given to freight protection also," he said, speaking at the meeting of the Pacific Coast Transportation Advisory Board in Oakland in June. "I urge that carriers' claim and freight protection agents insist upon some measure of common sense in making and enforcement of car service rules and loading requirements."

"Not even the Pollyanna who writes the advertising copy for the Association of American Railroads will dispute the fact that transportation conditions are abnormal, despite the proud boast of the railroads that they are moving all freight offered and their 'Oliver Twist' clamor for more."

"Giving them due credit for a well done performance under difficult conditions, even an incurable optimist like myself must view with alarm the growing loss and damage claim account, which resembles the increase in the national debt."

Double Capacity

Western Gear Works plant at Lynwood, Calif., is to be doubled in size. A building permit for \$105,000 has been taken out.



• Vultee's suggestion box is shown above, with the bulletin board at the right giving the names of award winners and above it a picture board with photographs of outstanding suggestions and an explanation of each. Suggestion blanks available in the holder attached to the box.

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LOS ANGELES

INDICES OF WESTERN INDUSTRIAL PROGRESS

ELECTRIC ENERGY PRODUCTION (In thousands of kilowatt hours)

MOUNTAIN STATES

	1941	1942
January	705,949	776,393
February	615,956	699,140
March	675,693	801,335
April	667,064	733,696
May	718,953	780,492
Year to date	3,383,615	3,791,056
June	730,070	
July	753,863	
August	826,264	
September	869,839	
October	907,602	
November	858,158	
December	817,005	
12-month total	9,146,416	

OREGON-WASHINGTON

	1941	1942
January	561,680	776,314
February	509,347	699,402
March	557,717	774,351
April	556,031	756,158
May	603,463	789,790
Year to date	2,788,238	3,796,015
June	614,075	
July	625,691	
August	649,464	
September	623,335	
October	676,041	
November	679,687	
December	753,121	
12-month total	7,409,652	

CALIFORNIA

	1941	1942
January	814,668	941,620
February	744,752	849,069
March	787,144	921,455
April	785,930	949,995
May	877,792	997,345
Year to date	4,010,286	4,659,484
June	940,846	
July	1,051,092	
August	1,027,127	
September	886,073	
October	842,359	
November	780,341	
December	902,301	
12-month total	10,420,425	

TOTAL WEST

	1941	1942
January	2,082,297	2,494,327
February	1,870,055	2,247,611
March	2,020,554	2,497,141
April	2,009,025	2,439,849
May	2,200,208	2,567,627
Year to date	10,182,139	12,246,555
June	2,284,499	
July	2,410,646	
August	2,502,855	
September	2,379,247	
October	2,426,002	
November	2,318,186	
December	2,472,427	
12-month total	26,976,001	

UNITED STATES

	1941	1942
January	13,332,526	15,347,655
February	12,018,537	13,828,699
March	13,094,704	14,778,810
April	12,677,238	14,336,153
May	13,377,015	14,745,615
Year to date	64,500,020	73,036,932
June	13,435,198	
July	13,991,023	
August	14,313,213	
September	14,124,543	
October	14,994,535	
November	14,233,369	
December	15,357,743	
Total	161,949,646	

CALIFORNIA

MOTOR TRANSPORTATION REVENUE

(From freight and passenger commercial vehicles, mostly freight. Includes highway common carriers, contract carriers, bus lines and taxicab companies. Does not include drayage within city limits. Figures furnished by courtesy of Transportation Tax Division, State Board of Equalization)

	1941	1942	Increase	Pct. Incr.
January	\$ 6,814,476	\$ 8,437,246	\$ 1,622,770	23.8%
February	6,119,722	8,110,112	1,990,390	32.5%
March	7,238,641	11,142,652	3,904,011	53.9%
April	7,845,858	10,311,161	2,465,303	31.4%
May	8,898,682	11,329,568	2,430,885	27.3%
Year to date	\$36,917,379	\$49,330,739	\$12,413,359	33.6%

PRODUCTION AND STOCKS OF FINISHED PORTLAND CEMENT (In thousands of barrels)

MOUNTAIN STATES

MOUNTAIN STATES		Production		Stocks at end of month	
		1941	1942	1941	1942
January		121	181	611	623
February		127	113	584	641
March		282	169	639	567
April		250	367	576	595
May		367	407	550	570
Year to date	1,147	1,237			
June		411		489	
July		420		435	
August		431		373	
September		394		274	
October		465		295	
November		375		399	
December		311		540	
12-month total	3,954			5,765	

OREGON-WASHINGTON

OREGON-WASHINGTON		Production		Stocks at end of month	
	1941	1942	1941	1942	
January	88	251	598	678	
February	201	279	608	678	
March	294	447	646	701	
April	347	505	687	698	
May	419	559	698	693	
Year to date.....	1,349	2,041			
June	430		658		
July	494		678		
August	517		586		
September	528		582		
October	447		547		
November	325		577		
December	288		621		
12-month total ..	4,378				

PRODUCTION

PRODUCTION			
TOTAL WEST		TOTAL U. S.	
1940	1941	1940	1941
21,447	28,186	108,384	135,355

CALIFORNIA

CALIFORNIA		Production		Stocks at end of month	
		1941	1942	1941	1942
January	.....	1,266	1,742	1,633	1,408
February	.....	1,098	1,552	1,612	1,474
March	.....	1,400	1,656	1,475	1,495
April	.....	1,389	1,590	1,205	1,528
May	.....	1,695	1,829	1,119	1,332
Year to date	.....	6,848	8,369	.....	.....
June	.....	1,659	.....	937	.....
July	.....	1,844	.....	956	.....
August	.....	1,934	.....	1,058	.....
September	.....	1,869	.....	1,459	.....
October	.....	2,074	.....	1,045	.....
November	.....	1,898	.....	1,229	.....
December	.....	1,728	.....	1,372	.....
12-month total	.....	19,854	.....	.....	.....

Steady Growth Shown In Deposits and Resources

Deposits and resources of Wells Fargo Bank of San Francisco registered sizable increases over the figures of a year ago, according to the June 30 statement of condition, released at the call of the state superintendent of banks. Total deposits, at \$335,036,931, compared with \$327,096,841 on April 4 (the previous call), and with \$323,839,884 on June 30, 1941. Total resources amounted to \$360,117,157, as against \$352,803,594 on April 4 and \$349,302,055 a year ago.

Holdings of U. S. Government securities stood at \$194,780,663—an increase of \$7,236,185 over June 30, 1941; and cash, at \$86,145,551, was \$16,735,759 higher, correspondingly. The June 30, 1942 statement showed \$647,296 reserved for taxes, as compared with \$296,187 a year earlier. Loans and discounts aggregated \$40,811,347, slightly above the June 30, 1941, figure of \$39,209,289. Undivided profits at \$3,036,646, showed an increase of \$113,451 over a year ago.

No Ceiling on Taxes

California corporations will pay \$500,000,000 in income and excess profits taxes under the Federal Revenue Bill now before Congress, as compared with \$85,000,000 in 1940-41, according to an analysis by the California State Chamber of Commerce. Individuals will pay \$550,000,000 in income taxes, compared with \$95,000,000 in 1940-41. A 5 per cent tax on the transportation of freight is one of the proposals.

Lockheed

Symbol of Southern California's rapidly-expanding war industry is the Lockheed Aircraft Corporation,

another client of Security's War Loan Department. This Department specializes in efficient handling of war loan applications. If you require emergency capital, remember "Security Stands for Speed."

WAR LOAN DEPARTMENT

SECURITY-FIRST NATIONAL BANK of Los Angeles

MEMBER FEDERAL RESERVE SYSTEM • MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION



WESTERN

TRADE WINDS

NEWS ABOUT THOSE WHO DISTRIBUTE AND
SELL INDUSTRIAL EQUIPMENT AND MATERIALS

Clyde Jordan was recently elected vice president and manager of the line support division of **Adel Precision Products Corp.**, Burbank, Calif. He started with the company as a laborer in 1938. His twin brother, Claude, was made superintendent of the line support division.

★ ★ ★



James M. Hoghland has been appointed sales engineer in the Pacific Coast area for the **American Screw Co.** of Providence, R.I. He is located at 1724 No. Vista St., Hollywood, Calif.

Mr. Hoghland succeeds K. T. Jackson.

★ ★ ★

L. D. Pulsifer, former western representative for various departments of the merchandising division, **Westinghouse Electric & Mfg. Co.** has been named Oregon representative for the company's industrial and central station divisions. He will contact Westinghouse utility customers throughout Oregon.

★ ★ ★

Christian de Guigne, III, vice president and director of the **Stauffer Chemical Co.**, San Francisco, went East to assume his commission in the United States Marine Corps.

★ ★ ★

California Redwood Association announces the closing of its New York office. Information still may be obtained from the Association's office at 405 Montgomery St., San Francisco, or from the West Coast Lumbermen's Association, Stuart Bldg., Seattle, Wash.

★ ★ ★

O. S. Stapley, founder of the **O. S. Stapley Co.**, one of the largest hardware and farm implement sales organizations in the southwest, died recently in Mesa, Ariz., at the age of 69. The **Arizona Hardware Co.**, a large jobbing firm, also was under his management. His sons are continuing the operation of the five Stapley stores.

C. Granniss Bonner was elected treasurer of **Pomona Pump Co.** of Pomona, Calif. He succeeds **Donald C. McKenna**, vice president, who now will devote full time to increasing production activities of the company's four manufacturing plants. Bonner was comptroller and treasurer of the **Brunswick - Balke - Collender Co.** of Chicago, Ill., before joining Pomona.

★ ★ ★

J. D. Sparks, manager of the Seattle branch office of **Ilg Electric Ventilating Co.**, has been named captain of the Seattle Auxiliary Coast Guard.

★ ★ ★

J. B. Ambler has been appointed district representative in the Middlewest for the **Pittsburgh Electrodryer Corp.**, of Pittsburgh, Penn. He will have offices at 602 Denver National Bldg., Denver, Colo. Ambler has been associated with the mining industry in that section for many years.

★ ★ ★



Gordon W. Monfort has been appointed personnel director for the San Leandro plant of **Caterpillar Tractor Co.** He will handle industrial relations, safety campaigns, plant activities, personnel director and employee publications.

Heretofore, Mr.

Monfort has been western advertising manager for the company, and had his own agency in Berkeley before joining Caterpillar.

★ ★ ★

A. B. Morris, general manager of **Nutting Truck Co.**, Faribault, Minn., visited the company's west coast dealers in recent weeks.

★ ★ ★

McDougall & Dixon, 610 Taylor Ave., Seattle, Wash., have been appointed distributors for **Mikolite Co.** Mikolite is a fire-proof, acid-proof, vermin-proof, odorless insulation of uniform density which does not settle. A complete stock will be carried in their Seattle warehouse.

Utility Trailer Co., 300 Aurora Ave., Seattle, Wash., are the new Pacific Northwest distributors for the **Utility Trailer Mfg. Co.** of Los Angeles. **Ed Dagner**, 233 N.E. 22nd Ave., Portland, Ore., will be the sales representative in Oregon.

★ ★ ★

Colorado Fuel & Iron Corp., Pueblo, Colo., produced 106,000 tons of ingots in May to smash all previous production records. **Donald M. Nelson**, WPB chairman, telegraphed his congratulations to the labor-management committee of C.F.&I.

★ ★ ★

F. Somers Peterson Company, 57 California Street, San Francisco, announces that it is now the Northern California representative for the **Cleveland Worm and Gear Company**, Cleveland, Ohio, manufacturers of worm gear speed reducers, and the **Farval** centralized lubrication system. The **F. Somers Peterson Company** is also representative of **American Brass Company**, **Fafnir Bearing Company**, **Gates Rubber Company**, **Lowell Wrench Company**, **Parish Pressed Steel Company**, **The Flex-O-Tube Company** and **Veeder Root, Inc.**

★ ★ ★

Harry B. Floydstead has been named administrative assistant at **Pacific Wire Works, Inc.**, in Seattle. Before coming to Seattle last June, Floydstead was engaged in investment banking in California.

★ ★ ★

A. M. Barrett, president of **Barrett-Cravens Co.**, Chicago, Ill., was a recent visitor to the west coast.

★ ★ ★

Waugh Laboratories have moved their Pacific Coast branch office from Los Angeles to 180 East California Street, Pasadena. **E. M. Irwin** is Pacific Coast manager. The company manufacture test instruments and provide engineering field service for the construction industry and several other specialized industrial operations.

WIRE ROPE

Wire Rope—Manila Rope—Tackle Blocks
Sheaves—Chain and Coffing Hoists
Shackles—Turnbuckles—Splicing
V-Belt and Roller Chain Drives
Alumite Guns—Plomb Tools
Fiege Electroline Wire Rope Fittings
Safe-Line Clamps—Safety Clips
Genuine Crosby Wire Rope Clips

★

LARKIN-POWELL CO.

INDUSTRIAL and RIGGERS SUPPLIES

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Los Angeles

THE WEST ON ITS WAY

Calship Gets 60 More Liberties

CONSTRUCTION of 60 more 10,500-ton Liberty class freighters by the California Shipbuilding Corporation has been ordered by the Government.

The contract will bring to a total of 224 the number of ships ordered from the corporation. The standard of the California Shipbuilding Corporation, effective in August, will be 12 ships delivered per month. This will mean 12 keels laid down and 12 launched.

Calship launched its forty-eighth ship on July 21, the eleventh in less than 50 days. The quickest a ship has been launched was 41 days from the laying of the keel.

In June, all records were broken by launching eleven 10,000-ton vessels and delivering 15 complete vessels to the Maritime Commission.

★ ★ ★

Plywood Lifeboats

One thousand plywood lifeboats, the first of this type craft ever built for the American merchant marine, will be constructed for the U. S. Maritime Commission by Gunderson Bros. of Portland, Oregon, the contract involving approximately \$1,300,000. Heretofore all lifeboats for Liberty ships have been made of steel. The plywood boats are stronger and lighter, saving more than a ton of metal to a boat. The cost is about the same. Motor lifeboats make up 250 units of the contract, while the remaining 750 are without power.

★ ★ ★

Pouring Aluminum

Olin Corporation's \$1,000,000 industrial aluminum plant at Tacoma will be in operation this month. It has 240 electrically heated pots each holding 1400 pounds of aluminum oxide. They are installed in a building 116 x 694 feet. The power load for the plant is 47,000 kilowatts, while the city of Tacoma's entire load is 117,000 kilowatts.

★ ★ ★

Six Bakersfield, Calif., firms have pooled their resources under the name of Kern County War Industries, Ltd., for a \$105,000 contract to build ship sections for the Kaiser shipyards.

Southeastern Utah's newest industry is the production of strategic vanadium pentoxide. The firm, to be known as the Vanadium Corp. of America, is located in Monticello. Authorized by the Defense Plant Corp. last November, work started with an initial expenditure of \$750,000. Subsequent expansion of construction plans, housing and equipment have brought the total expenditure to nearly double the original figure. A further boost of \$300,000 is expected for the installation of an acid leaching unit to process line-laden ores.

★ ★ ★

Mass production of wooden cargo-type truck bodies for the United States Army will be started soon in Stockton by the Harris Mfg. Co. They have an initial \$500,000 contract. The first body is slated to roll off the assembly line early in August. Approximately 200 men will be required for the initial operations with an ultimate 600 persons expected to be employed.

★ ★ ★

Installation of new equipment at the O. A. Hallberg and Sons apple drier in Graton, Calif., will make possible a daily output of eight dried tons per eight-hour day, according to Oscar Hallberg. About 30 women peelers and trimmers and ten men will be given steady employment.

★ ★ ★

The first load of salt from Death Valley, Calif., has been received by Basic Magnesium, Inc., at Las Vegas, Nev., preparatory to the start of magnesium production. The shipment consisted of 150,000 pounds of salt, and trucks will continue to deliver salt until the stockpile reaches the 200,000,000-pound mark.

★ ★ ★

A permit has been issued by the Santa Clara County Board of Supervisors to the Permanente Metals Corp. for the building of a ferro-silicon plant, the only one of its kind in the West. It is being erected on Permanente creek near the great magnesium plant. The new plant will produce an iron alloy used in the reduction of magnesium, replacing a supply which had to be transported from the East.

Ship repair facilities in the Portland harbor will be more than doubled with the permanent installation of a \$4,000,000 to \$5,000,000 floating drydock and a marine railway near two of Portland's three navy yards. The construction program involves erection of a wood pontoon drydock near the Willamette Iron & Steel Corp. large enough to handle small cruisers and the largest cargo vessels. Near the Commercial Iron Works, a side-haul marine railway will be built at a cost of approximately \$1,750,000.

★ ★ ★

A sixty-acre tract, northwest of Escondido, has been purchased by Anne von Seggern for a commercial airfield. The tract will allow for the installation of two runways.

★ ★ ★

The United States Vanadium Corp., acting as agent for the Metals Reserve Co., is reported to have started stockpiles for vanadium ore at Moab and Thompsons in Grand County, Utah, at Gateway in Mesa County, Colo., and Dove Creek in Dolores County, Colo. The plan is designed to encourage development of small properties not now producing, and to provide a reserve supply of vanadium ores.

★ ★ ★

Application for an \$80,000 building permit for addition to the Rosenberg Bros. & Co. fruit packing plant in Santa Clara, Calif., was filed last month. The addition is reported to be the first of two buildings planned to centralize the Rosenberg operations. The one-story structure will be of masonry, using a minimum of metal.

★ ★ ★

John D. Robertson, Inc., pickle and olive packers, are taking over the Union Ice packing shed, located east of Reseda Boulevard along the Southern Pacific right-of-way, in Northridge, Calif. Pickles will be packed for distribution throughout the United States.

★ ★ ★

A \$1,400,000 government war production contract has been awarded to the Fresno branch plant of Kyle & Co., Inc., steel concern, according to Charles G. Connors, president and manager of the company. The contract calls for the construc-

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EXbrook 3038

tion of seven army crane salvage barges. After completion of prefabrication work in the local plant, the material will be shipped to Stockton for assembly and launching at the Kyle company's shipyards.

☆☆☆

The Golden State Co. is negotiating for the purchase of four lots owned by Orland in Glenn County, Calif. The site, fronting the Southern Pacific right of way, is desired for a new warehouse.

☆☆☆

Construction of a 300-ton milling plant is scheduled for property of the U. S. Smelting Refining and Mining Co. at Vanadium, N.M. The company has been developing the lead-zinc property, and a three-compartment shaft is being sunk. John B. Knaebel, Silver City, N.M., is superintendent.

A steel furnace for the conversion of scrap will be constructed at Bakersfield, Calif., by the Haberfelde-Laughlin Steel Co. of Bakersfield, a new organization in which James M. Laughlin, president of the Laughlin Steel Co. of Los Angeles, joins with the Haberfelde interests of Bakersfield. A \$150,000 furnace is to be erected, to work on a \$1,000,000 army contract. It is reported that 250 men will be employed.

☆☆☆

The Columbia Shipbuilding Co. has signed a lease for use of the 27-acre former Sibley mill site near St. Helens, Ore., where the Sommarstrom Brothers built wooden ships during World War I. According to John Webb, vice president and general manager, four ways are to be constructed at Columbia City. Once the yard is in operation, it will run 24 hours a day, seven days a week.

Work on a \$62,000,000 chemical plant, to be erected on the Denver-Brighton road in Derby, Colo., already is under way. Calls for workmen are being received, and it is expected that more than 15,000 laborers will work on this construction.

☆☆☆

Completion of a plant in the Los Angeles area about August 1 for the treatment of vanadium concentrates from Nevada has been announced. The Wilzonia Development Corp. will produce in its first unit over 2,000 pounds daily of vanadium. A. R. Chandler, Los Angeles chemical and refinery engineer, is president of the company.

☆☆☆

The Defense Plant Corp. has authorized the installation of a third carbon baking plant at the Aluminum Company of America's reduction project in Torrance, at a cost of \$4,500,000.

OPPORTUNITY SECTION . . .

Priorities regulations have made it practically impossible to secure new machinery for industrial operations unless a plant is doing 100 per cent work on war projects. Even then, long delays are in prospect. The government is urging full use of existing machinery. Listed here are "machinery opportunities" immediately available here on the Pacific Coast. Recently, used machine tools were made subject to priorities, but this does not apply to other classifications of machinery.

ELECTRIC MOTORS

COMPLETE ELECTRIC MOTOR SERVICE

CIRCUIT BREAKERS

- 1—1200 A-600 Volt 3 pole ITE Air Breaker
- 1—800 A-250 Volt 3 pole West. Air Breaker
- 1—500 A-600 Volt 3 pole G.E. FKS Oil Breaker
- 2—300 A-2500 V. 3 pole G.E. FK20 Oil Breaker
- 2—300 A-2500 V. 3 pole West. F10 Oil Breaker
- 1—200 A-550 V. 3 pole West. F10 Oil Breaker
- 3—100 A-2500 V. 3 pole G.E. FK20 Oil Breaker
- 3—40 A-2500 V. 3 pole G.E. FK20 Oil Breaker

MOTOR GENERATOR SETS

- 1—720 A-110 Volt G.E. with 150 HP Motor
- 1—600 A-110 Volt West. with 100 HP Motor

SLIP RING MOTOR

- 2—1½ HP-1200 RPM Type MT GE
- 3—3 HP-1200 RPM-Type CW West.
- 1—7½ HP-1200 RPM-Type CW West.
- 1—22 HP-1200 RPM-Type FRVI US
- 1—30 HP-900 RPM-Type FRVI US
- 1—50 HP-900 RPM-Type MT GE
- 1—75 HP-900 RPM-Type HV FM

DC MOTORS

- 1—15 HP 230 Volt 1150 RPM GE
- 1—5 HP 220 Volt 1150 RPM GE
- 2—3 HP 220 Volt 1150 RPM GE
- 3—1½ HP 115 Volt 1750 RPM Shunt wound
- 7—2 HP 115 Volt 1750 RPM Shunt wound

Rewinding 2655 Santa Fe Avenue Repairing
JEfferson 5255 Los Angeles, Calif. JEfferson 5255

LITTLEJOHN-REULAND CORPORATION

MACHINERY SALE

MOTORS

- 1—260 H.P. Synchronous G.E. 225 RPM, 2200 volts, 210 KVA.
- 2—250 H.P. Westinghouse, Type CS, 290 RPM, 2200 volts.
- 1—200 H.P. G.E. Type I, 600 RPM, 440 volts.
- 1—200 H.P., G.E. 1800 RPM, 440 volt motor.
- 1—150 H.P. Westinghouse, Type CS, 1800 RPM, 440 volts.
- 1—150 H.P. Westinghouse, Type CS, 900 RPM, 2200 volts.
- 1—150 H.P. G.E. Type I, 720 RPM, 440 volts.
- 1—100 H.P., Slip Ring, G.E., 720 RPM, 440 volts.
- 1—75 H.P. G.E. Type KT, 1800 RPM, 440 volts.
- 1—62½-Ft. 2½-inch Double Leather Belt.
- 1—60 H.P. G.E. Type I, 1800 RPM, 440 volts.
- 1—50 H.P. Vertical Fairbanks Morse, 1200 RPM, 220 volts, solid shaft.
- 1—35 H.P. Crocker Wheeler, 1200 RPM, 220 volts.
- 1—10 to 30 H.P. Slip Ring, Westinghouse, Type MW, 860 RPM, 440 volts.

GENERATORS, BLOWERS, WATER PUMPS

- 1—1500 Watt, Direct Current, 110 volt, Kohler automatic light plant.
- 1—600 Amp, 7500 volt, Westinghouse Type F3 oil circuit breaker.
- 1—300 H.P. Triumph Water Wheel with governor, 30 ft. head.
- 1—No. 70 ILG Blower, 17,430 CFM, direct to 6 H.P. 340 RPM, 3 phase motor.
- 2—75 KVA Transformers, G.E. Type H, 6600 to 120/240/480 volts, 60 cycle.
- 1—60 H.P. Byron Jackson Turbine pump, 1200 GPM at 140 ft. head.
- 1—50 H.P. Single Drum Mine Hoist.
- 1—37½ KW, Westinghouse DC Generator, 550 volts, 900 RPM.
- 1—20-inch Krogh Split Case Pump, 11,000 GPM at 26-ft. head.
- 1—10 K.W. Direct Current, 110 volt Kohler automatic light plant.

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1093

• **WELDING**—This 64-page catalog is designed to assist the manufacturer in making a wise selection of gas welding and cutting equipment. Outstanding color work in the catalog dramatizes the use and construction of Victor equipment in a manner seldom found in technical publications. Included are black and white reproductions of parts and equipment. The photographs and technical material form a handbook on welding and cutting for service workers and engineers. Victor Equipment Co., 844 Folsom St., San Francisco, Calif.

1094

• **SCREW NAILS**—Drive like nails, but turn and hold like screws. Do not bend or buckle, nor do they need drilling, even for hard wood. Made of special high-tempered steel. Literature on Helyx drive screw nails available. The Hillwood Mfg. Co., 21715 St. Clair Ave., Cleveland, Ohio.

1095

• **CHAIN CONVEYOR**—Consists of a steel tubular track in which is a continuous chain made up of a series of vertical and horizontal wheel units. The vertical wheels are connected by an axle through the side plates of the unit frame. The horizontal unit is made of a wheel and link, the wheel bearing on the inside of the track when rolling around a horizontal curve. The conveyor will handle 65 pounds per foot of length in single suspension and 125 pounds with double suspension. Catalog A-78, "The New R-W Production Line Conveyor," contains complete information with illustrations of typical installations and gives brief data to show conditions under which application can be made, description of chain and drive and section drawing. Richard Wilcox Mfg. Co., Aurora, Ill.

1096

• **TOOL CONTROL MACHINE**—Protection for tool investment through a practical, simple, fast control device—a machine that records charge-outs without error, without arguments and without red-tape, according to the manufacturer. An illustrated explanation is contained in a four-page leaflet. Ohmer Register Co., Dayton, Ohio.

1097

• **SAFETY METHODS**—Folder entitled "Safety Simply a Matter of Horse Sense" was prepared for industrial engineers interested in protecting the workers in their plants. The manufacturer points out that these safety installations not only help to protect machine operators, but increase production as well. A. Schrader's Son, 470 Vanderbilt Ave., Brooklyn, N.Y.

Write to WESTERN INDUSTRY, 503 Market Street, San Francisco, for copies of this material. This data may help you to do a better job.

1098

• **LIVE CENTERS**—Four-page catalog, No. 542, gives complete information and specifications about standard taper live centers. Proper equipment, care and constant research work has proved that the ideal live center must contain the following basic principles: Sturdiness, free and easy rotation, automatic compensation for expansion, shock and wear, accuracy, durability, ample tool clearance and simplicity, practicability and low cost. Sturdimatic Tool Co., 5220 Third Ave., Detroit, Mich.

1099

• **LEAD-TIN PRODUCTS**—Folder entitled "Alpha Lead and Tin Products" lists varying alloys-solders, extruded shapes, pipe and tubing and many specialties frequently demanded by defense orders. A lead-tin alloy table is included. Alpha Metal and Rolling Mills, Inc., 363 Hudson Ave., Brooklyn, N.Y.

1100

• **AVIATION EQUIPMENT**—This ten-page bulletin describes various pieces of equipment which should prove helpful to the aircraft industry. Among the products illustrated with operation explained are: Hydraulic Hoists, Spotting Dolly, Portable Crane, Elevating Table and Open-End Lift Truck. Lyon-Raymond Corp., Greene, N.Y.

1101

• **DUTY BLOWERS**—Catalog SD1141 contains performance ratings on the complete Utility line of dynamically balanced blowers, dimensions, discharges and drive arrangements. In addition, the catalog illustrates and describes enclosed drive blower sets, twin and triple blowers and other air moving equipment. Utility Fan Corp., 4851 So. Alameda, Los Angeles, Calif.

1102

• **COLLOIDAL GRAPHITE**—Bulletin No. 230.8 covers standard dispersions of "dag" colloidal graphite in various carriers. Included are major applications for the use of colloidal graphite dispersions, such as "Aquadag" (in water), "Oildag" (in petroleum oil), "Castordag" (in castor oil), "Glydag" (in glycerine), as well as "dag" dispersions in the more volatile liquids such as mineral spirits. Also covered in the bulletin are "Prodag," a concentrated graphite suspension in water largely used for parting compounds, coarse wire drawing and for forging lubricants. Acheson Colloids Corp., Port Huron, Mich.

1103

• **CARTRIDGE CASES**—Bulletin 77 shows a few of the designs available in wire baskets and crates for annealing, pickling and washing cartridge cases. Also included is a page showing the other products and services offered by this company. Cambridge Wire Cloth Co., Cambridge, Maryland.

1104

• **BLACKOUT VENTILATION**—Pointing out that the need for ventilation grows acute in buildings with painted, closed or otherwise "blacked-out" windows, the bulletin features a typical solution which has been engineered on the West Coast. Using standard Power Roof Ventilators, special "Blackout Hoods" were fabricated. Then, to replace windows as sources of fresh air, special hooded fresh air inlet louvers were designed and built. Utilizing this system, there is no light transmitted through the Power Roof Ventilators nor through the Fresh Air Inlets, according to the manufacturer. Ilg Electric Ventilating Co., 2850 No. Crawford Ave., Chicago, Ill.

1105

• **SCRAPER METHODS**—Entitled "Modern Methods for Scraper Mucking and Loading," the book contains 184 pages, more than 400 photographs and schematic drawings, detailed data and numerous sample problems. It is divided into four parts: 1. Scraper Hoist Equipment; 2. Metal Mining Methods; 3. Coal, Non-Metallic and Miscellaneous Mining Methods; and 4. Hoists and Engineering Data. Ingersoll-Rand Co., 11 Broadway, New York, N.Y.

1106

• **METAL ALLOYS**—An engineering reference catalog of brass, bronze and iron alloys. Contents include details about P-M-G, a silicate bronze made without tin; and the composition, application and physical properties of 31 other alloys. The book pictures products made of Cramp alloys, gives a list of Cramp brass and iron products, describes the effects of various elements on iron and discusses terms used in materials testing. Cramp Brass and Iron Foundries, The Baldwin Locomotive Works, Philadelphia, Penn.

1107

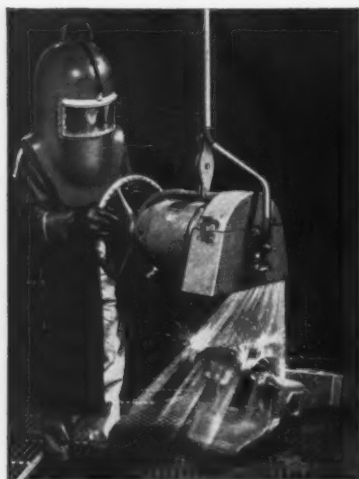
• **ROTOBLAST**—Bulletin 213 explains how this product fits in with your cleaning needs. According to the manufacturer, the Rotoblast Barrel takes care of all three of the requirements of a modern cleaning room: Speed, quality of finish and low breakage rate. Pangborn Corp., Hagerstown, Maryland.

THE SHOWCASE

Do a BETTER JOB with NEW EQUIPMENT

For more complete information concerning any of the products listed in these columns, write to Western Industry, 503 Market Street, San Francisco, and we shall see that the material is forwarded to you. Descriptions of the products and claims made are those of the manufacturer.

• **PORTABLE WHEELABRATOR**—A new development in the field of airless abrasive blast cleaning. Being airless, this unit eliminates such equipment as air compressor motors, pressure tanks, mixing chambers, air receivers, piping, hose, valves and nozzles. It is claimed that the Wheelabrator has been applied successfully to

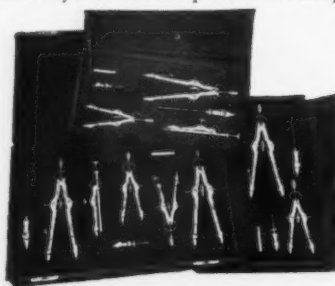


the cleaning of a wide range of large and small intricate, irregular shaped work such as that handled in jobbing shops or where the daily production of various parts does not warrant the use of special equipment. American Foundry Equipment Co., Mishawaka, Ind.

• **SPEED-PATCH**—For repairing holes, spalls, worn expansion joints or as a complete resurfacer of floors. A ready-mixed, cold plastic material to be used as taken from the package. It is claimed that Speed-Patch is a one-minute, or less, operation; may be laid during working hours without interrupting plant operations and is benefited rather than injured by truck traffic while installing. For complete resurfacing, Speed-Patch is spread all over the floor and rolled out to a smooth, ready-to-use floor. Handles any weight load, provides a safe, low traction, permanent floor repair and has greater resistance to oils and

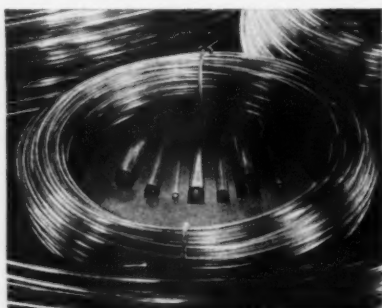
greases. Folder and technical data sheet available. Rock-Tred Corp., Dept. H., 605 West Washington Blvd., Chicago, Ill.

• **DRAWING INSTRUMENTS**—Available in three combinations of bows, drop bows and pens. These instruments are said to embody new and unique features of open



truss design which increases strength and rigidity while cutting weight by 40 per cent. This rigidity, combined with concentricity, enables the user to describe extra-large, dense circles in pencil without the instrument yielding. Each bow has a center-screw adjustment which articulates with the legs by cylindrical nuts. The legs bear upon a double-groove hinge pin of a broad base, assuring strength and perfect alignment. Construction is of steel, satin-chrome plated. V & E Engineering Co., Pasadena, Calif.

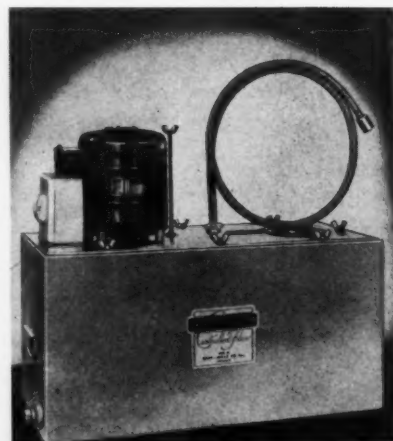
• **TRANSPARENT TUBING**—Available in sizes ranging from 3/16 to one inch, this seamless tubing is extruded in continuous lengths. Virtually unbreakable, according to the manufacturer, it can be bent, formed or curved to fit almost any condition. Weld marks and joints are eliminated in the fabrication of Tenite tubing. The ends may be adjusted easily to standard flared fittings with the same tools that are used for copper tubing. Large diameter tubing with



wall thickness of .0625 inches can be threaded with standard thread-cutting tools. Julius Blum & Co., Inc., 532 West 22nd St., New York, N.Y. Western representative: J. G. Holzgang, 1725 Venice Blvd., Los Angeles, Calif.

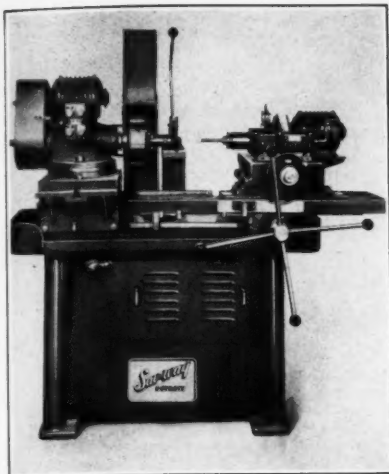
• **MUFFLE FURNACE**—Designed primarily for fritting and glazing ceramics at temperatures up to 2,000 degrees, this new electric muffle furnace also is highly efficient for heat treating high speed tool steels, hardening, tempering, and many other tool room and laboratory heating applications. Principal advantages include low initial and operating costs, long operating life at maximum temperature, and quick heating which is obtained in less than one hour. An outstanding feature is the new-type center pivoted door which eliminates the mechanism and consequently much of the cost of the standard sliding door plus the advantage of always swinging away from the workman, preventing exposure to the heat of the inner door surface. H. O. Swoboda, Inc., 127 Thirteenth St., New Brighton, Penn.

• **COOLANT PUMPS**—Designed to prolong tool life, speed up production and lower operating costs. Features are complete portability, controlled flow from a



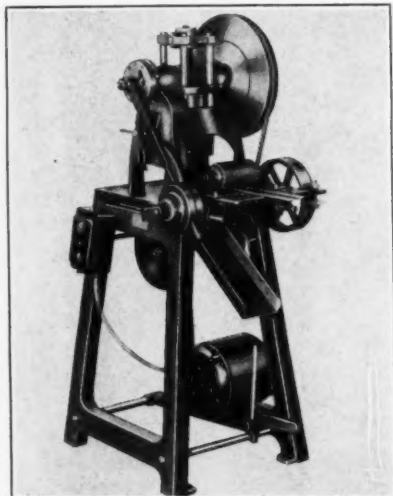
few drops to full stream, baffle plate construction and forced settling fixture to keep coolant fluids clean at all times, larger tank capacity to eliminate frequent coolant changes, ball bearing type motors, easily replaced driving gears hardened for long wear, cleanout plug for quick and easy tank cleaning, flexible power shaft coupling and easy access to all working parts. Descriptive literature available. Gray-Mills Co., Inc., 213 West Ontario St., Chicago, Ill.

• **INTERNAL GRINDER**—Grinds holes up to nine inches deep and from 1/4 to 18 inches in diameter, straight or tapered sides. According to the manufacturer, greater flexibility and the handling of a wider range of work has been made possible. Construction of headstock permits



adjustment to a distance of $3\frac{1}{2}$ inches at right angles to the wheel traverse by loosening of two nuts. Variable V-belt pulleys provide four variations of work head speed. Machine is equipped with automatic wheel guard. Base is welded steel construction. Machine weighs 3,130 lbs. Sav-Way Tool and Machining Co., 13855 Joseph Campau Avenue, Detroit, Mich.

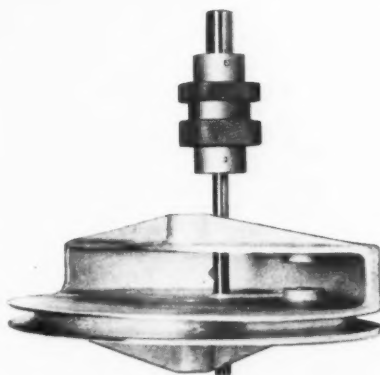
• **STAMPING PRESS** — Automatically produces small stampings of metal, fibre, plastics and other materials at adjustable high speeds of 180, 370 and 500 strokes per minute. Feeding mechanism is built in and handles strip or coil stock equally well.



Safety features make it ideal for women operators. According to the manufacturer, construction is such as to insure perfect die lineup, resulting in low die maintenance cost. Descriptive folder of Diebel Hi-Speed Press available from Di Machine Corp., 3654 Lincoln Ave., Chicago, Ill.

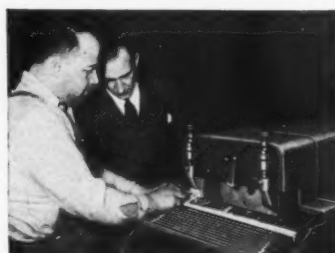
• **BURRING TOOL** — Effective and valuable in removing burrs from the inside edges of multi-walled parts. According to

the manufacturer, this new burr removing tool cuts finishing time to a minimum by eliminating slow and costly hand methods of burring. The tool is simple in construction, consisting of a cylindrical shaft which pilots in the hole to be deburred, and a knurled collar is fastened to one end of the shaft. The collar is a free-rolling ball bearing unit that can be grasped and held by the hand even while the shaft is rotating. By sliding the collar up or down the burring



blade may be advanced into cutting position or withdrawn. Used in a drill press, lathe or other machine spindle, the burring tool is kept in continuous motion while parts are fed to it as fast as the operator can handle them. Nobur Manufacturing Co., 6156 Santa Monica Blvd., Hollywood, Calif.

• **SPLASH GUARD** — Keeps the operator and floor dry during wet grinding operation. The guards are concealed and are close to the wheels, affording the operator the maximum amount of light and fullest operating freedom. Each guard is rotated easily from one side of the wheel to the other by a handle. As an integral unit, the hood, which encloses the no-spray—no-splash guards, and the table mechanism, protected from ingress of dust and grit, is mounted on enclosed shaftways and is moved in or out from the wheel by a con-



venient crank, providing quick means of adjustment for wheel wear and wheel changes, it is claimed. Hammond Machinery Builders, 1643 Douglas Ave., Kalamazoo, Mich.

BUSINESS BOOKS

Your Legal and Business Matters by Henry E. Ashmun. Written for the layman who does not realize that many of the questions on which counsel is here given are recurring continually in his every-day life; who does not stop to think that an agreement to pay for a radio in installments is a contract. Some of the topics discussed are: Contracts; Savings and Investments; Lending and Collecting; Personal Injury and Property Damage; Wills; Patents; and Taxes. Price \$1.75. Published by The John Day Company, 2 West 45th St., New York City.

Technique of Plywood, by Charles B. Norris. Assumes widespread importance with the present demand for plywood skyrocketing in production of wartime housing, airplanes, boats and other defense needs. Incorporates 30 chapters on this subject which originally appeared in "Hardwood Record," together with illustrative practical graphs, charts and tables. Divided into five main sections under the following headings: "Strength, Deformation and Elastic Stability of Plywood"; "Elastic Theory of Wood and Plywood"; "Manufacture of Plywood"; "Warping of Plywood"; "Bending, Moulding and Embossing of Plywood." Red plastic binding over heavy duty covers. Price, \$2.50. Published by I. F. Laucks, Inc., 314 Maritime Bldg., Seattle, Wash.

Trade and Professional Associations of the United States. A comprehensive directory of the nation's larger cooperative organizations. Prepared by the Department of Commerce, Bureau of Foreign and Domestic Commerce, it lists more than 3,100 national and interstate trade and professional associations and gives, for most groups, in addition to the name and address, the date of organization, name of the chief executive, number of members, chief activities of the group and data on federated groups. Price 70c. Superintendent of Documents, Government Printing Office, Washington, D.C.

An Oil Burner Handbook by L. J. Whelan. Uses every-day language, and is understandable to the home owner, mechanic and technician. Chapters on servicing explain the causes of problems met most frequently in the average home; burner starts and stops too often; not enough heat in the house; oil odors in house; and high oil consumption. Designed to teach how to repair and service an oil burner for the conservation of valuable fuel oil. Price \$2.50. Published by The Master Plumber & Heating Contractor Magazine, 554 Atlantic Ave., Brooklyn, N.Y.



• Welder applying Stoody 6 to an automotive engine valve.

Demonstration Of Welding and Facing

One of the demonstrations in connection with the Automotive Transportation and Maintenance Conference of the Society of Automotive and Aeronautical Engineers at Los Angeles August 22 is that of welding and hard surfacing in recovery of worn and used automotive parts at the Stoody Company plant at Whittier.

Stoody 6 is one of 14 different types of alloys manufactured by Stoody to resist wear and prolong the life of equipment subject to abrasion. It is an alloy of tungsten, cobalt and chromium and is supplied as welding rods for application by the oxy-acetylene method. It is used to protect all types of valves, hot work dies, hot punches, collets and other parts subject both to red heat and corrosion.

ODT Rescinds 75% Return Truck Load

Office of Defense Transportation has abandoned its requirement for a 75 per cent back haul for trucks, and the War Department has shelved, for the time being, at least, its proposal to limit truck

hauls to 300 miles. A 40-mile an hour speed limit has been fixed by ODT.

Tires also will be denied to privately operated trucks carrying beer, other alcoholic beverages, soft drinks, candy, tobacco, flowers, furs, radios, musical instruments and other luxury goods unless the hauling of these items is only incidental to the main service performed by the trucks. The effect will be to throw this business into the hands of common carriers and thereby effect rubber savings.

In the War Department hearing, C. G. Anthony, executive vice-president of the Motor Truck Association of Southern California, testified that war goods were moved considerably faster by truck than by rail. He said more than 1,800 communities in California alone have no railroad service, while in the eleven western states there are 5,772 other communities served only by highway carriers.

Urgent shipments are normally made 400 miles by truck between San Francisco and Los Angeles in 15 hours, where similar rail shipments are not handled until the third day and frequently the fourth day, according to Anthony. Many shipments also are rushed by truck from San Francisco Bay points to Seattle, 900 miles, in 32 hours by truck where rail transit averages nine days.

One Ohio plant manufacturing automotive equipment depending on sub-contractors in Los Angeles and New England for vital parts, gets eight-day deliveries from Los Angeles by truck against 13 days by rail, according to Don B. Smith of the Consolidated Freight Company, Saginaw, Mich.

Abandonment of the 75 per cent return load provision eases somewhat the pressure on private carriers, many of whom were having to sacrifice their truck fleets because of inability to comply with the ODT order. They now may return empty or partially empty if the equipment cannot be leased

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to another carrier or a return load cannot be found after using due diligence.

Many private operators have applied to the California Railroad Commission for certificates as public carriers.

The U. S. Truck Conservation Corps plan of the ODT, by which oil companies, tire manufacturers and truck dealers obtain signed pledges from truck operators to do protective maintenance, and from service stations, tire shops and truck garages to perform truck service completely, is expected to produce good results.

Barrett & Hilp, San Francisco general contractors, have been awarded a contract by the U. S. Maritime Commission for thirteen large concrete barges, to be built like ships and designed for ocean travel.

The West is New...

- According to a survey conducted by the editors of WESTERN INDUSTRY, 72% of the West's industries are less than 30 years old.
- Plainly, the problems in managing young and growing industry are vastly different from the problems found in long established industry in the eastern half of the country. That's one of the important reasons why the men who manage industry in the West read WESTERN INDUSTRY—it talks their language, deals with their problems and champions their causes.
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—That's what it takes to sweep the Axis from the skies: mighty fighter 'planes with a heavyweight's hitting power, the speed and shiftiness of a lightweight champ.

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